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MONTHLY REPORT

OF

THE AGRICULTURAL DEPARTMENT

FOR

NOVEMBER,

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MONTHLY REPORT.

DEPARTMENT OF AGRICULTURE,
Washington, November, 1865.

The present report contains a *third* letter from Mr. Glover, the entomologist of the department. It is written from Paris, near the close of the Industrial Exhibition. It is followed by one from Mr. Collins, who is in China purchasing seeds in that country, and making such observations of its agriculture as may aid in the advancement of our own.

The communication of the entomologist refers to several matters of interest. It is proper here to remark that the flower-seeds so kindly sent to this department by Vilmorin & Co. are intended for trial in the propagating garden, and not for distribution. By next year it is expected that such distribution can be made as will minister to that love for flowers now rapidly increasing over the whole country. However brief may be the duration of the life of a flower, the influence it exerts is permanent. The love of the beautiful should be cultivated by the American people especially, for the accumulation of wealth has a strong tendency to neglect it, and thus lose its salutary influences.

In the letter of Mr. Collins several interesting particulars are mentioned concerning the agricultural and business pursuits of the Chinese. The boxes and seeds spoken of have just come to hand. The contents of the boxes will go to the museum, together with the interesting additions made to it by the entomologist, who has just returned from France and England.

The usual amount of statistical matters will be found in this report, accompanied by such remarks as their nature demands. A return to lower prices seems to be generally demanded; for it is obvious that the importations are excessive, and are not met by a corresponding amount in the export of produce. The abundance of farm products points to this as an auspicious period for this decline. The sooner it is commenced, the more gradually it may be conducted. A sudden change would operate most disastrously, and to avoid it is wisdom, and the duty of all.

But the portion of this report that will attract most attention is the table exhibiting the general summary of the crops of 1865. In it the amounts of the leading agricultural products are given, and compared with those of 1864 and 1863. Though it was well known that the corn crop would be one of the best ever grown in the country, yet its magnitude has surpassed all anticipations. Its increase over the crop of 1864 is 173,846,450 bushels, and in *quality* it is universally excellent.

Doubts have been expressed by some commercial papers of high standing of the ability of this country to export wheat, on account of the deficiency of that

cereal. But the great scarcity of farm stock to consume the surplus corn will leave so great a portion for bread purposes that it will be very largely used as a substitute for wheat. Corn bread, mush, hominy, &c., will greatly lessen the consumption of wheat, and thus in effect increase the amount that may be exported. The present indications are that English prices will advance to a point that will allow exportations of breadstuffs from this country. The continued spread and ravages of the cattle disease, not only in Great Britain, but in Holland and other countries from which that nation derives large supplies of cattle and other animal food, must create so large an increase in the consumption of breadstuffs as to approximate English prices to an equality with our own. In this view the magnitude of the corn crop is the more gratifying.

Since 1862 there has been a scarcity of food for stock-raising purposes. The consequence is now seen in the high prices of meats, arising from the scarcity of cattle and hogs, preventing us from exporting meats, which the demand in Europe, owing to the cattle plague, would have made almost unlimited. But this year has produced a great abundance of all stock food, and again, as often heretofore, the farmers are urged to grow stock, as the foreign demand for meats will doubtless continue in the future. With the great surplus of corn we have an overplus of oats and hay, exceeding the amount of oats grown in 1864 by 48,562,231 bushels, and of hay 5,421,989 tons. Such an abundance should insure a rapid increase of cattle and hogs.

The entire production of cereals and potatoes is as follows: For 1865, 1,228,501,282 bushels; 1864, 1,013,429,871 bushels; 1863, 953,288,632 bushels, making an increase in 1865 over 1864 of 215,071,411 bushels, and over 1863, 275,212,650 bushels.

With joy, then, over such gratifying results I congratulate the farmers of the country, and render thanks to those correspondents whose faithful and unwearied exertions have enabled this department to make estimates so gratifying to the whole country. This is the only nation that so early and so fully computes the amount of its agricultural productions. The importance of such estimates is now being recognized abroad. The mode of making them is commending itself to foreign nations, for with every month come new applications from Europe for the monthly reports.

Through the kind attentions of the Secretary of State several communications addressed to that department relative to the prevalence of the cattle plague, and the measures adopted by European governments to stay its ravages, have been placed before me. Some of these measures have already been published in these reports, and I cannot but renew the statement made in the September report as regards the course that should be taken by our government. In a government of so great an extent it is no easy matter to protect the nation against the introduction of epidemics or epizootics. Still, effective quarantine regulations may be adopted in diseases like that of the rinderpest.

* * * * * Let us not rest in fancied security that it is too rapid a disease to be continued in a voyage across the Atlantic. We see that the disease may be, not *dormant*, as is the term, but *undisclosed* for *twenty* days.

Suppose an animal, just infected with the disease, to be taken on ship with others; it may be near our shores, or indeed on them, before it is known to be diseased, or if the disease is developed before being landed it would have communicated it to others, and these would be in apparent good health when arriving here. Two measures can, therefore, be adopted by the government: it can require that no animal of the cattle kind shall be shipped in vessels coming to the United States from Europe, unless they have been in quarantine there for three weeks before being put on board; that when any animal is attacked on shipboard by the pest, it and all others on board shall be instantly killed; and that places of quarantine shall be prepared at certain ports, into which only shall cattle be brought from Europe, and there held for one month after landing; or else positively prohibit the importation of cattle whilst the disease remains in Great Britain. or from the ports of any nation in which the disease exists. The importation of cattle from a country, where this disease is, is nothing less than treason to our agriculture. All other measures guarding against the introduction of the disease through the clothing of persons who might have had contact with a diseased animal on shipboard will have to be adopted, if importation of cattle is permitted How far it is necessary to restrict or prevent commerce in any parts of the cattle kind, as the hair, horns, skins, &c., with countries where the disease prevails, must be left to the judgment of that department that has commerce under its supervision. But it is not the duty of this government to rest, as did Mr. Simonds, in the fancied security "that no fear need be entertained that this destructive pest will reach our shores, by reason of its great distance from us," or that it cannot break through the *cordon* of the Atlantic to desolate our country.

ISAAC NEWTON, *Commissioner.*

CORRESPONDENCE OF THE ENTOMOLOGIST.

[LETTER No. 3.]

PARIS, FRANCE, *September* 27, 1865.

SIR: I have this day forwarded to the Department of Agriculture, by way of Havre, (care of Messrs. Herbett, Kane & Co., No. 8 Place de la Bours,) one long wooden box, containing engravings of the "Album Vilmorin" for the museum, and several packages of the most choice flower-seeds, &c., for the green-houses of the department. As Messrs. Vilmorin, Andrieux & Co. have most generously presented them to the department, (although I offered to pay for them,) I hope that when they arrive they may be duly and officially acknowledged. I should also be very much obliged if you would save a very small portion of each package for me, as I promised to test them myself and report to Messrs. Vilmorin & Co. Later in the season we shall receive another package of seeds, of this year's growth, from the same source. Messrs. Vilmorin & Co. have the highest reputation in France for their flower-seeds, and they have selected only the very best, in order to keep up their reputation in the States, and to show what really good flowers are. Several, if not all of these seeds, can be sown this autumn in the green-houses; but as Mr. Saunders will know all about their habits, &c., I will leave it to him. Enclosed in the box you will also find a package of grass seeds—"*Ceratochlia Australis*," or "*Bromus Schræderii*," which is now so much recommended as a forage plant in France. However, I imagine it is nothing more nor less than the "Iverson grass," which was all the rage in Georgia some few years ago, although lately we have heard nothing more about it, most probably on account of the war. Nevertheless, as there is some doubt about its being the same grass, I thought it best to send a small package for trial. You will also find seeds of the true "*Pyrethrum*," the plant from which the celebrated insect powders are made. I have endeavored to get all the information I could on this subject, and find that if the dried fresh flowers alone are used, and the air excluded from the bottles in which the powder is preserved, the fine dust is a powerful insect destroyer, when blown or scattered upon them by means of bellows and other instruments made for this purpose, and samples of which I shall bring with me. At the present time, however, they adulterate the powder of the flower so much with the stalk and leaf, that nine times out of ten the insect powder, as we purchase it out of the shops, is of very little value. In the Exposition there were several varieties of the plant "*Pyrethrum Willemotti*," Caucasian *Pyrethrum*, *P. roseum*, with green, smooth leaves and pink flowers, and *P. reigidium*, (perhaps the same as *P. Willemotti*,) with leaves covered with cottony hairs and a white flower like our common ox-eye daisy. I have procured seeds of all the varieties, (but unfortunately mixed in one paper,) so that if Mr. Saunders will plant some, I shall be able next year to make experiments with them, and report upon its utility or otherwise.

I forward also by this mail a paper containing an official list of the premiums, &c., so that you may see what I said in my last letter, is officially reported. Mr. Bigelow, and all the Americans I have seen in Paris, appear to be very much pleased that America has come out "first" in this exposition of insects, &c.; but whether it will do me any good, individually, remains to be tested, as the medal really belongs to the government and not to me, as being in government service at the time the medal was awarded, although, as you well know, the work was commenced six years before I entered government service, and never touched during government working hours, except for reference when information was required.

You will also receive another French paper which speaks in very high terms of our Agricultural Department, and many other French papers have very flattering notices of the utility and efficiency of our "bureau;" so that I hope I may flatter myself that my time has not been entirely lost, and that I have done what you desired—that is, to show to other nations that although our country has been desolated by war, agriculture has not been neglected, and that the Department of Agriculture has not lost one iota of its old vigor and efficacy—nay, even during the time of war, has been raised to a separate and independent department.

Mons. Guerin Meneville has given us some very fine specimens of silk cocoons, &c., and has promised to aid us in forming a national agricultural and economic museum.

Mr. Jules Laverrier, 12 Rue de Chateau, Montmartre, Paris, was here yesterday, and said that he had an interview with Mr. Klippart when he was here, and has been expecting a letter from him. Mr. L. stated that Mr. K. wanted him to give him information on several agricultural subjects that Mr. Klippart had not time to attend to himself. I believe that Mr. Laverrier is or is about to be appointed secretary to the Central Agricultural Society of France, and therefore will be a most useful auxiliary to our department. He approves so much of the plan of our museum that he says he will endeavor to establish one on the same principle for France, and if successful, promises to exchange French specimens of grains and other productions for our American kinds.

Mr. Laverrier has spent several years in Mexico, and wishes to induce Americans to commence the silk culture in that country, which he says is specially adapted to it both in climate and the comparative dryness of the seasons. The inhabitants he states to be particularly fitted for rearing the silk-worm, as their whole attention has hitherto been given to the cochineal insect, which now is of comparatively little value; so many substitutes for this valuable dye having lately been discovered, the price of cochineal is at present so unremunerative as to almost put a stop to their culture. I see by the Lyons papers that complaints are made about Americans taking away their best workmen, in order to commence the silk weaving, &c., in the States. If so, perhaps it may prove a good thing for our southern secession sisters, if the inevitable and ubiquitous negro could only be taught how to rear and take care of silk-worms, the climate of our southern States being most favorably adapted to their cultivation, and the morus multicaulis, when once planted, growing and flourishing in the greatest profusion. The length of the season would also be so much more than in Europe, several crops of worms might be produced in one season. If, however, the raising of silk-worms is ever carried on to any extent in the southern States, we should be extremely careful not to import any seed or eggs from Europe without being perfectly convinced that they come from healthy stock, as in Italy and elsewhere the silk-worms are dying by millions from a peculiar disease, which by many has been attributed to a fungoid origin: if so, sulphur might probably be beneficial; also, burning all the diseased worms, leaves, and refuse left by them might check the malady. Speaking of the silk-worm disease reminds me that several English papers now complain that the cattle disease is not confined to cattle alone, but has attacked the sheep also. If this is really the case, other domestic animals may in the course of time be subject to it, and no doubt the infection is liable to be carried from field to field by other animals, if it is not, as asserted elsewhere, an atmospheric complaint, and only local. I have heard whilst here of the potato disease being arrested by means of fresh lime mixed with the potatoes when in heaps or in the barrel—all the sound potatoes being preserved in a good state, whilst those that are affected with the rot remain in the same state as when put into the lime. I merely mention this, as it will be extremely easy for the department to make the experiment and report upon its efficacy or inutility.

In my letter about the exposition of insects I forgot to particularize (if I may use the term) the collection of Dr. Eugene Robert. This collection consists of specimens of our forest-tree woods destroyed by insects under the bark. The most interesting fact about it is, that he states "the diseased or infected trees can be cured and restored to pristine vigor by a process of decortication, or stripping off the outer bark from the tree by means of certain instruments, such as scrapers, &c., at a particular season of the year." This he states he has done, and with the most beneficial effects; and proves his practice to be correct by specimens of woods which he has operated upon exhibited in the collection. The label attached to these specimens is as follows: "Dressing, founded on vegetable physiology, of the trees injured by *xylophagous* (wood-eating) insects, by means of the method of superficial decortication, or taking off the old rind to the *liber* exclusively, &c., &c." I have myself heard of old orchards of apple trees being rejuvenated in the State of New York by cleaning off the whole of the bark from the trunk at a certain season of the year, when, it was said, a new and healthy bark was formed again in a few weeks. But as my informant was very apt to "shoot with the long bow," I pad no further attention to the fact, but thought he had merely scraped and cleaned his trees pretty severely, and told him that I would much rather try his barking remedy in my neighbor's orchard than in my own, as, if all the bark were taken off, and no strips left by which the circulation could be carried on, and the exact season not hit upon to perform the operation, no doubt the trees would die even sooner than when a large ring of the bark and wood is chopped out, as is the practice in the south when "deadening" trees for the future plantation of cotton and corn. However, I give the facts as I heard them from Dr. Robert, and if any person wishes to try the experiment on his apple orchard he does it at his own risk.

The other day I visited permanent exhibition of Algeria and the colonies, in the industrial palace, and was exceedingly pleased with the system and arrangement of the museum, as it approaches nearer than anything I have yet seen to what we are endeavoring to accomplish in our own infant museum, and only shows what can be done for the public if we are allowed by congressmen to go on with the useful work we have commenced. As I was especially directed by you before I left Washington to visit and describe all the agricultural and economic museums I could, I shall only be fulfilling my duty in giving a more detailed account of the plan upon which this museum is rendered at the same time so interesting and useful, not only to the farmer but also to the manufacturer, the druggist, &c. Indeed almost any man, no matter what his trade or profession, can always learn something here useful and new in his business, and frequently find to his own astonishment that things he has hitherto looked upon as weeds or mere cumberers of the ground, by science and industry can be made a source of great profit both to himself and to his country. Although the name was attached to each object, I missed our system of references to the different or best works in which a fully detailed account is given about the plant or seed, or where the particular mode of manufacture is fully described.

In the first place the specimens are divided into series, secondly into sections, so that any object may be found by referring to the number of the section and series, which is conspicuously printed in golden letters over each glass case:

Series 1 contains vegetable substances and their productions.
Series 2. Minerals.
Series 3. Animals and their productions.
Series 4. Productions taken from the waters.

These four series are then subdivided into sections, thus:

Series 1, containing vegetable substances and their products, is divided into—
Section 1. Woods and bark, as cork, &c.

Section 2. All textile materials and fabrics excepting cotton.
Section 3. Cotton threads and cotton tissue.
Section 4. Oils and saponaceous substances.
Section 5. Dyes and tannin substances.
Section 6. Gums, resins, and varnishes.
Section 7. Medicinal drugs, &c.
Section 8. Cereals, grains, forage plants, and legumes.
Section 9. Flour, meal, and pastes made from them, such as maccaroni, vermicelli, &c.
Section 10. Wines, alcohols, preserves, and confectionery.
Section 11. Essential oils, perfumes.
Section 12. Tobacco.
Section 13. Sundry industrial vegetable productions.
Section 14. "Herbiers."

Herbarium, &c., fill up the other numbers; but as there is another section of tobacco, &c., I think it best to close here, as the others are comparatively of little consequence.

In these sections we want fruits, flowers, &c., between the woods and textile fabrics; cereals and grains might be put after instead of where it now stands; and, in short, the whole arrangement can be so modified as to be extremely simple and utilitarian.

Series 2. Minerals:
Section 1. Substances metallic.
Section 2. Substances non-metallic.

Series 3. Animals and their products:
Section 1. Wool, hair, and their products.
Section 2. Silks.
Section 3. Skins and leather.
Section 4. Wax and honey.
Section 5. Bone, horn, and turtle shell.

Here we want separate sections for animals, birds, insects, &c., together with the contents of the birds' stomachs, showing what particular insects are destroyed by individual species of birds, and peculiar marks designating each specimen as injurious, or otherwise. We should also want specimens of draining tiles, &c., in order to show which are best for peculiar soils, and several other useful agricultural manufactured articles. In this museum I would also mention that there are specimens of pottery, dresses, scimetars, ornaments, and other things made by the natives, which we do not want in our museum; and last, but not least, there are several idols of wood and stone of no value excepting as curiosities; although if we had a golden calf, and warranted pure California gold, no doubt we could find many worshippers in Washington, especially if each worshipper were allowed to take a specimen away with him, as some of our visitors wish to do.

The first case, viz: the woods, contains all the woods of Algeria and the colonies which can be used for furniture and other purposes. Another case is devoted to the cork as it is stripped from the tree, as prepared for use, and finally, as in the form of cork and other manufactured articles. As bushels of the real cork-bark acorns from Spain were imported into the United States several years ago, and distributed by our office, chiefly in the southern States, we may yet hear of some good results, in the course of time, as it cannot be expected that they all fell into poor hands, and were not attended to. As the culture of the vine for the purpose of making wine is increasing so rapidly, it would be a most excellent thing if we could produce our own cork instead of importing it from Spain and elsewhere. In the section of textile materials and fabrics, excepting cotton, I observed fibre of the *Agave Mexicana*, or aloe; the *Heliconea caribea*, or Bra-

silier; *Musa textilis*, or abaca; hemp of Saigon, a species of *Urtica*, or nettle, from Cochin China; also string made from the fibre; *Coir*, or cocoanut fibre, of which a coarse rope is made; fibre of the *Ananas*, or pine apple, apparently very good; *Battanbang* and *Suntang*, hemp-like fibre from Cochin China, very fine, and apparently strong fibre, made from the stalks of the *Hibiscus esculentus*, or the common okra of our vegetable gardens; also, fibre made from the *Bromelia kanatos*, (*?*) and banana. A curious kind of fibrous cloth is also made by beating the inner bark of the *Brouss onétia papyrifera*, or paper mulberry in Tahiti, as, likewise, from the Dawron bark and *Ficus prolixa* from New Caledonia.

I hope you will excuse this business-like catalogue, but I thought it might be useful to refer to in case we should ever succeed in founding our museum of agriculture, &c. Among the cotton fibres I observed the large six-divided pods of the *Cochlospermum gossypium*, which somewhat resemble large square-formed pods or bolls of the common cotton. There was also another variety, called the *Coton pierre*, very much like the South American tree cotton we have in the museum, and also with all the seeds apparently soldered together. A kind of substance or fibre resembling nankeen or brown cotton was very curious: it grows on a plant called haresfoot, as labelled in the museum, and when on the plant, root, or whatever it may be, looks exactly like the fuzzy hair which grows on the foot of the European hare; but whether the fibre is of any utility or not I cannot learn. In the collection was some thread made from the silk pods of the *Asclepias curassavica* and *A. gigantea:* it appeared to be very good as seen through the glass, but I much doubt its strength if taken out and subjected to any stretching process. The silk cotton tree, *Bombax pentandrium*, also produces a silky cottony fibre, in a long light-brown pod, which gradually tapers at each extremity. This fibre I believe is, however, only used for stuffing mattresses, &c., being much too brittle and short to be spun into strong threads. Some of the seeds are very beautiful, and are used by the natives for necklaces and other ornamental purposes. Among these I observed "Job's tears," *Croix lachryma*, of a pearly gray color; the *Abrus precatorius; Liane religiose*, of a bright scarlet color, with a black spot on one end; and the *Adenanthera pavonina*, altogether of a bright scarlet, without any other color at all. This last seed is the same as we have in the museum from the south of Africa, (I believe.)

The oil-producing nuts are very numerous and well represented in this collection. Passing over the castor-oil bean, rape, &c., and others which are well known in our country, I will merely mention some of the most remarkable: *Moringa pterigosperma; Noix de Ben. aile* is very much like our oil of Ben-seed in the museum; the Galba oil nut, *Calophyllum calaba;* the candle nut, *Aleurites triloba*, something like a large, smooth hickory nut in shape, size, and color; oil from the seed of *Melia Azederach*, or pride of China, a tree which grows most vigorously in the southern States, and which until now I never thought was of any use excepting for ornamental purposes, and the berry for robins, and also sometimes used to steep in water, which water, when poured on the roots of cabbages, is said to destroy the cut-worm; the oil, however, looked like a thin, yellow lard, and did not appear to remain in a liquid state. The oil from our common peanut was extremely fine and clear: a great many of these groundnuts are now imported into France from Algeria, but in former years tons of them were shipped from the southern States, especially North Carolina, the oil pressed out and refined in France, and then returned to us and frequently sold as pure olive oil. If there were more enterprise in the south, a very large business could be done in the oil of peanuts. The *Raphia* nut resembles a bright brown burnished closed pine-cone. The oil from it appears to be very fine. The other oil-producing nuts and seeds are, *Curcas purgans*, about the size and somewhat the shape of a very large castor-oil bean, of a blackish brown color; *Oreodoxa oleracea*, or "*palmite a*

colonnes," the *Lalanier, La pania Borbonica, Areca oleracea, Bancoule* nut, from Reunion; *Buchavania latifolia,* (oil sometimes solidifies;) the *Acajou* nut, or *Semecarpus anacardium,* produces a very good-looking oil; the oil wood *Tapira guyanensis,* from Guayana, with specimens of the wood, oil, leaves, &c.; and, lastly, the nut or fruit of the soap plant from Martinique, *Sapindus saponaria.* There are also very fine samples of oil from cotton seed, melon, *Cucumis sativa,* palm, Indian hemp, cocoanut, &c.

Resins and varnishes I will pass over, and merely mention some of the specimens of flour and meal in the exhibition. There are beautifully white samples of flour of the arrow-root, *Maranta arundinacea,* the *Manioc Jatropa, Manihot chayote,* or *fecule de chouchoute, Sicyas angulata, Arum esculentum,* from Martinique; *Dracontium polyphyllum,* from India; *Colocasia esculenta,* from Guayana; flour from the common potato, and Salep. The *Dioscorea alata* furnishes a yellowish brown flour like our Indian meal.

Tanning materials are also exhibited in their proper section. These substances being very numerous, I only took down the names of some few, among which were the *Myrobolan citrin,* or *verminalia chebula,* the size of a medium hickory; also the bark of *Mangifera indica* and *Acacia lebbec.* There are also some models of fruits from Martinique: these are not very good, but there are some most highly finished and natural models of other fruits, such as apples, pears, but they are few in number, and not arranged with any regard to system; the labels likewise have merely the names, and no references whatever. There are some very finely modelled large roots, such as the elephant's foot, or *Iguame,* and the *Calocharia gigantea.* I shall, however, stop here, for fear of exhausting your patience; but must say that such a museum as I have just described is one of the most interesting and useful institutions known, as it forms a perfect reference to almost any subject, and once formed, grows yearly from the contributions of agriculturists and naturalists, &c.; and remain

Your obedient servant,

TOWNEND GLOVER.

Hon. Isaac Newton,
Commissioner of Agriculture.

LETTER FROM CHINA.

Tientsin, China, *July* 25, 1865.

Dear Sir: When I last wrote you I was on the eve of leaving China, but finding I had not funds enough to return home as I desired, I resolved to visit Peking, the Great Wall, and then to get back to the United States some time next winter as best I could, for I have always been rich in expedients. When I last wrote you I requested a reply directed to Alexandria, Egypt, in order that I might return through Europe, via Odessa, Russia, but fearing that no reply might come to hand I abandoned the project. I now propose to return to Shanghai, from the north of China, in September next, and leave for Alexandria and Europe about midwinter. I desire to make the same offer now that I made in a previous letter, to visit Odessa from Alexandria, if you will pay the difference in expense—about one hundred dollars. At any rate, I shall go home via Europe, and if I can serve you in any way I shall be happy to do so; and ample time will intervene to hear from you before I leave Shanghai if you write on the reception of this letter. Enclosed you will find receipted bills for freight on boxes shipped at Shanghai February 28, 1864, and May 9, 1865; concerning the box shipped to care of Fogg & Co., New York, February, 1864, I wrote you at length at the time. Those shipped May 9, 1865, contain seeds

and a few other articles, such as cases of prepared insects, samples of Chinese paper, models of agricultural implements, a few books, &c., &c. I purchased the real agricultural implements, but found that the freight would amount to too much, so I resold them. I might have purchased any number of articles for a museum, but the expense would be considerable, for original cost, packing, freight, &c. Indeed, Shanghai is, in everything, the most expensive place I ever visited; indeed, the very store boxes in which my articles were packed cost $4 (Mexican) each. Nobody seems disposed to present anything. As there are no seed stores in China, I attempted last autumn to collect seeds in the country, but as the farmers have none to spare, I was charged enormous prices for every little thing, the Chinese supposing that strangers have any amount of money; I therefore employed an intelligent Chinaman to do the work, and after a month's labor the small lots of seeds sent you was the result. It was my intention to have had each bag labelled, with a statement of the Chinese mode of planting, the uses of the seeds, &c., but it involved the expense of an interpreter; besides, I do not think there is anything rare in the lot, except a green bean, (small,) from which the Chinese manufacture a most beautiful vermicelli; the process I have not yet been able to learn, but will, and inform you. In the other box I send a lot of hemp-seeds, and also roots, as this is the only means of propagating the plant. I fear they will all rot long before reaching America, but I was instructed by Chinamen to send them in this manner. These roots were obtained some eight hundred miles southwest of Shanghai. I have examined a great deal of corn and wheat, but find nothing better than the samples sent. In one of the boxes I send a copy of a reprint, made not many years since, of a work compiled originally under the Ming dynasty. I have had the work examined, but not translated, as it would be the labor of months, and be very expensive, though, no doubt, very instructive on some points. The title of the work is "A Complete Treatise on the Business of Husbandry." It consists of six sections, in twenty-four volumes. The subjects discussed show a wide investigation, and are divided as follows: Sections 1–3, the origin of husbandry; sections 4–5, measurement and allotment of land, including definitions of particular kinds of lands available for tillage; sections 6–11, occupations of husbandry, including separate articles on tillage, drainage, irrigation, and the calendar of crops; sections 12–20, irrigation and application of water-power to machinery, (wells, pumps, &c., &c.,) treating on separate branches, viz: irrigation as practiced in the northwest, south, and east of China. For introducing the arts of Europe, in this direction, an apology is made in the introduction. These sections, (12–20,) as well as those on the allotment of land, are illustrated with wood cuts. Sections 21–24, agricultural implements, (illustrated;) sections 25–30, arboriculture, including the various gourds, cucurbitocia, (not illustrated;) sections 31–34, culture of silk-worm, mulberry and silk-worm, and the manufacture of silk, (illustrated;) section 35, cotton, (illustrated;) section 36, hemp, four varieties, (illustrated;) sections 37–38, planting timber trees and ornamental trees, including several econonomical plants, such as the oil, soap, and lacquer and other trees and plants; section 39, planting and uses of the bamboo, tea tree, and aster; section 40, miscellaneous plants; section 41, domestic animals; section 42, receipts; sections 43–46, on famines; sections 47–60, a classified herbal of all plants that may serve to mitigate the severity of famines by being used as food.

And now let me say something of my trip to the north of China. In order to avoid the hot and sickly weather of Shanghai during summer, I took passage in May last to Tientsin, at the mouth of the Piho, by steamer. The time was five days; passage, one hundred and ten Mexican dollars. By sailing vessels the charge is lower, but the time very uncertain. We stopped on the way at Chipoo, at the extremity of the premontory, and at Sako, at the mouth of Piho. Tientsin is the northern terminus of the general canal, and a place of much importance. It is a great grain mart for Peking, &c. The distance to Peking is

about eighty miles by road. The mode of travel, by cart, drawn by horses or mules. The carts are exceedingly strong, and some are quite elegant in style. They are covered, and have no springs; indeed, the vehicles of America could not survive the tumble roads of this part of China. The roads and carts are well applied to each other. The hames and attachments are like those of our American drays, and I suspect our western mode is in no respect superior. I was thirty-six hours reaching Peking. The country from the sea to about ten miles of the capital is one vast plain, and the cultivation is chiefly wheat, corn, beans, and different varieties of millet. I have found several varieties of sorghum, millet, here, but not one kind possessing a sweet juice. Sorghum is cultivated here for the seed and for the stalks, the latter being used, when dry, in building fences, roofs, heavy screens, and used for fuel, it making a very hot fire. I am satisfied, by my visit to the north of China, that the sorgho, near Shanghai, is the only plant worth noticing in this direction. I have selected, however, a few seeds of the northern seeds. Peking is a vastly overrated city, its population being certainly not over 1,000,000. It covers a vast space unoccupied within the city. The walls, and the countless plantations, trees of Peking, are its greatest attraction. Its general aspect is mean, with the exception of a few streets, the balance mere lanes. For the most part, the streets are unpaved. In summer the heat is very great, and during the dry weather the dust is terrible. When I get down to Shanghai I propose to prepare a paper on my trip to the north, and therefore have given you these hasty remarks at present. I trust you will write me on receipt of this. As I have never heard from my papers to you, I fear they have miscarried—no great loss. I shall try and gather more sorgho seed this fall, and send to them you, besides other seeds. I have heard of the sad news from America, but I believe that Andrew Johnson is equal to the times.

Yours, very respectfully,

V. D. COLLINS.

Hon. ISAAC NEWTON,
Commissioner of Agriculture.

P. S.—I send you a bank bill of one of the Peking banks, worth a little less than a dollar. Banks are old institutions in China.

A GOSSIP CONCERNING SORGHUM SUGAR AND MOLASSES.

In the preceding communication of Mr. Collins we find the statement that sorghum is not cultivated in China as a sugar or molasses plant. In a former letter he thus refers to the same matter:

"Strange as it may apear, I cannot find in their agricultural works, or in actual practice, the *slightest* evidence that the Chinese cultivate sorgo (or *Loot-so*) for any other purpose whatever than for chewing or sucking the stalks. * * * The plant is not considered a valuable product by the Chinese, or it would be more extensively grown, for I do not believe there are twenty acres sown on the whole island *(D'Zong-ming)* near Shanghai."

But the following letter is more full as to the uses made of this plant by the Chinese. It is written by the Rev. S. M. Williams, an intelligent missionary at Peking, to William Olmstead, through whom Mr. G. Emerson, of Pennsylvania, made inquiries relative to the fact whether the Chinese used the sorghum for making sugar. Mr. Emerson has kindly sent a copy of it to this department:

PEKING, *June* 22, 1864.

MY DEAR SIR: Your note respecting the granulation of sorghum sirup into sugar has just come to hand, and I am sorry to disappoint your friend respecting the process adopted by the Chinese. They have no process for the manufacture of sugar from the plant, for they make none at all, nor sirup. They do not, in this region at least, know that the juice of the sorghum is capable of being boiled down to a sirup, and still obtain all their sugar from the south of China. The objects for cultivating this sort of millet are to furnish nutritious fodder from the leaves, obtain fuel and building materials from the stalks, and distil spirits from the seed. Most of the spirits drank in northern China is made from the sorghum, and I don't know where the poor people would get fuel if its stalks were not so abundant. It therefore amply repays the culture, and could not, I think, furnish sugar so cheaply as Swatan and Canton can, even if it was known to have a saccharine sirup, in consequence of the high price of fuel to manufacture it. The spirits made from it is not so empyreumatic as the samshee of Canton made of rice, but, judging from the effects on the natives, must be stronger. I have no doubt but that the science and skill of the United States will ere long find a mode of granulating its sirup into sugar, if the process is possible in the nature of things.

Truly yours, S. M. WILLIAMS.

We concur with Mr. Williams in the opinion expressed by him, that the science and skill of the United States will find some mode of granulating the sorghum sirup. Our country is at this time in advance of all others in the cultivation of the plant for sugar purposes. Our own seed is purer than any other, for since it has been ascertained that it readily mixes with broom-corn and doura, it has been kept to itself, and the selection of seed made with greater care. How far new varieties produced by hybridization may aid in perfecting the granulation of the sirup, is yet to be determined—a work for which this department is now prepared, having many new varieties of seed and an experimental garden.

The following extracts from letters written to the department show the excellence of the sorghum crop this season, and the extreme latitude in which it may be profitably grown.

Mr. N. E. Nelson, of Sibley county, Minnesota, writes:

"The farmers are making arrangements for a large cultivation of sorghum. Several machines and evaporators have been brought into this county this fall. Sorghum has been successfully cultivated in adjoining counties this summer. The sirup has been sold here at one dollar per gallon, with an average yield of one hundred and twenty gallons per acre."

Mr. Thomas Hooper, of West Chester, Pennsylvania, says:

"There is a disposition here to plant more extensively, and my sons have gone to considerable expense in fitting up works for the manufacture of sirup, and they have been making two hundred and fifty to three hundred gallons per day, boiling by steam in copper pipes laid in wooden pans or boxes, and making a superior article, weighing twelve pounds to the gallon."

A gentleman from Bloomington, Monroe county, Indiana, writes as follows:

"The country is full of sorghum molasses—very fine, and selling at one dollar per gallon. William Seward has just returned from Greene county, where he went to examine an evaporator, which he says will be a perfect success. It

is an improvement on Cooke's. Application will be made for a patent. He brought three samples of sugar, obtained from granulated molasses by dripping and pressing in a common cider-press. The whiteness of the samples was produced by dipping the bag containing the sugar in clear water, and again pressing. Sugar is being made about here by placing the molasses in a vat, and bringing the atmosphere to a certain temperature. This produces granulation. It is then dripped and pressed. One gallon of molasses will yield five pounds of sugar, and the drippings will be a half gallon of good molasses. I have no doubt but that very soon sugar and molasses will be made in large quantities. The Sewards have made and sold two hundred and fifty sugar-mills this season, and did not supply the demand."

The present season has been very favorable to maturing the sorghum crop. The seasons of 1863 and 1864 were unfavorable. In his notice of the weather, Mr. Nelson, of Minnesota, says:

"We have had the most open fall of any since I have been in the State—eleven years—having had no frost until the morning of the first of November. One strange freak of nature here is the bearing of a second crop of strawberries—nice ripe wild ones being gathered all through the month of October."

This "freak" indicates two things, a greater moisture and heat in the fall than ordinary. These have kept back the frosts, and thus gave a prolonged and more favorable season for the maturing of the sorghum. What, then, we want, is a variety of sorghum that will mature quickly; and in addition to it, such a cultivation as will hasten this maturity. In the early part of the season, the growth should be pushed by warming and stimulating manures, and moisture should be secured either in the location or by irrigation.

The sale of the two hundred and fifty sugar-mills above mentioned, in an inland county, shows the great progress that the sorghum crop is making. The sale is double that made in any preceding year by the same firm, and if there is anything like a proportional increase generally, we may regard sorghum as one of the important crops of the country.

DECREASE IN EXPORTS.

The decrease in our exports and the cause of it are matters of the highest importance, when considered with reference to importation. The following statement of the leading articles exported from New York shows in what articles there is an increase and decrease:

Exports of leading articles of domestic produce from New York for ten months from January 1.

Articles.	1863.	1864.	1865.
Ashes ..... barrels..	9,714	7,810	8,672
Beeswax ..... pounds..	147,129	422,454	187,044
Breadstuffs:			
Wheat flour ..... barrels..	2,170,405	1,713,379	1,138,151
Rye flour ..... barrels..	5,055	2,667	2,228
Corn meal ..... barrels..	112,783	94,649	108,495
Wheat ..... bushels..	13,664,989	11,842,820	1,823,935
Rye ..... bushels..	416,249	453	170,694
Oats ..... bushels..	118,974	39,310	67,509
Barley ..... bushels..	52,439	150	.....
Peas ..... bushels..	86,499	175,555	50,813
Corn ..... bushels..	7,445,102	802,966	2,623,008
Candles ..... boxes..	101,192	110,683	78,491
Coal ..... tons..	42,716	47,484	20,741
Cotton ..... bales..	12,639	25,610	103,898
Hay ..... bales..	17,668	32,835	28,100
Hops ..... bales..	21,562	17,739	13,339
Naval stores:			
Crude turpentine ..... barrels..	4	746	3,005
Spirits turpentine ..... barrels..	837	352	728
Rosin ..... barrels..	4,152	1,529	29,382
Tar ..... barrels..	8,010	1,413	8,491
Pitch ..... barrels..	1,242	2,839	970
Oils:			
Whale ..... gallons..	262,456	409,547	14,119
Sperm ..... gallons..	496,094	1,214,114	82,977
Lard ..... gallons..	793,548	124,570	23,662
Linseed ..... gallons..	14,884	58,577	12,804
Provisions:			
Pork ..... barrels..	161,368	119,010	101,276
Beef ..... barrels..	33,818	32,276	33,868
Beef ..... tierces..	35,473	44,205	43,042
Cut meats ..... pounds..	170,573,369	87,797,888	30,590,163
Butter ..... pounds..	13,143,125	11,724,664	9,289,859
Cheese ..... pounds..	32,100,933	38,557,711	35,697,023
Lard ..... pounds..	107,683,994	49,333,739	20,309,311
Petroleum ..... gallons..	.....	18,377,280	9,932,599
Rice ..... tierces..	168	4	58
Rice ..... barrels..	9,266	18,840	17,792
Tallow ..... pounds..	35,241,807	28,084,404	14,043,025
Tobacco, leaf ..... packages..	88,385	129,622	129,171
Tobacco, manufactured ..... pounds..	2,585,864	4,412,417	3,646,463
Whalebone ..... pounds..	151,160	480,104	209,591

An examination of this table shows that the principal decline in our exports is in flour, wheat, pork, tallow, oils, and hops; and the decrease of most importance is in cotton. This decrease of exports is generally attributed to the high currency prices, and the relief, it is argued, must be found in the decrease of the amount of paper money. The commercial press is in error in this view, for if the cause assigned be true, its application would be general. Cotton is as much controlled in price by the currency as wheat or lard; yet the exportation of the one has greatly increased, whilst of the other it has greatly decreased. Petroleum has been reduced in exportation one-half since last year, while the price here has been receding. The difference in currency and gold prices is

merely nominal—this is seen in our imports. In fact there is but one thing to which we need look for the cause of this change in our trade with foreign nations—to the law of supply and demand. The home demand was greater—much greater—for pork, and all other products of the hog, than the supply; hence prices for these ruled high—beyond the foreign prices. This difference cut off exportation. As to wheat, England did not want it. Flour and wheat in that country have been so low during the last twenty months, that English farmers were bitter in their complaints against the unremunerating prices they were receiving, and were seriously considering how the home supply should be reduced. Great Britain, therefore, did not want our wheat and flour, unless at prices lower than at home. The short crops of corn in 1863 and 1864, with a heavy demand for it created by the war, forced such a home consumption of wheat, that the home price far exceeded the foreign. The war in different ways made whale oils scarce, and the supply was too limited to sustain the usual export. Petroleum was abundant, but the European demand was greatly lessened by supplies of their own, and excessive imports in 1864.

In every case of decreased export there has been a disturbance of the law of supply and demand, and it is to it, and not to the difference between currency and gold values, that we are to look for the cause of this decrease. So, on the other hand, we find the same operating cause as to our increase of exports. That of cotton affords a striking illustration. Peace largely increased the supply, and a corresponding increase of export followed, the demand continuing the same.

The greatly increased supply of nearly all agricultural products must result n decreased prices, unless the increase of foreign demand should be proportionate to the increase of this supply. At present we see no certain hope for this, although the continued spread of the cattle and potato diseases must enhance the consumption of cereal products in Great Britain. In the interior this law of increased supply and of diminished government demand is now operating. Our regular correspondent at Livingston county, Illinois, thus writes on November 1:

"Prices, also, are greatly depreciated—over 50 per cent. at least, and on many articles more than that, with the exception of cattle and hogs. No farm products are paying. Oats are selling for fifteen cents per bushel; wheat, one dollar; rye, forty cents; barley, fifty cents; corn, (new) twenty cents. Compare these with last year's prices and see what a falling off there is."

A strong warning to farmers, and others, to beware of debt as of a consuming fire. This is in obedience to the law of increased supplies and decreased demands. We think that a much more profitable matter of examination and censure on the part of the commercial press will be the heavy costs of transportation. Railroad profits, just now, are altogether greater than agricultural. With diminished rates of transportation, corresponding to the lessened prices in the interior agricultural districts, an increase of exports may be anticipated without any material change in the amount of the active currency.

AGRICULTURAL PRODUCTS OF THE UNITED STATES AND CANADA, RECIPROCITY TREATY, ETC.

We find the following table in the Cincinnati *Price Current*. It is presented by the *Montreal Transcript*, and compiled (so it informs us) by an eminent English statistician. Now any one who can do a simple sum in the rule of division can do all of the "eminent statistician" that is required by the table. But this "flourish of trumpets" has its purpose. The table, unimportant in itself, is important to the American farmer in that *purpose*, for it exhibits an intention to press upon this country a renewal of the reciprocity treaty, and is a presentation of an argument for this renewal. The table is heralded by this sonorous caption:

"*The life-sustaining products*, &c., of the United States, *per capita*, compared with Canada; the former taken from the census and agricultural reports for 1860, and the latter from the census of 1861."

The table itself is as follows; our comments will be found below it:

Articles.	United States.	Canada.
	Per capita.	*Per capita.*
Wheat.....bushels....	5.50	11.40
Barley.....bushels....	0.50	2.26
Rye.....bushels....	0.67	0.80
Peas and beans.....bushels....	0.47	5.13
Oats.....bushels....	5.49	17.21
Buckwheat.....bushels....	0.55	1.12
Indian corn.....bushels....	26.67	1.07
Rice.....bushels....	0.09	.....
Total cereals per *capita*.....	39.94	38.73
Irish potatoes.....bushels....	3.53	16.47
Sweet potatoes.....bushels....	1.33	.....
Sugar.....pounds....	8.03	6.50
Molasses.....gallons....	0.73	.....
Honey.....pounds....	0.74	.....
Milch cows to every hundred persons.....number....	27	31
Oxen.....do.....number....	6	11
Other cattle.....do.....number....	60	30
Sheep.....do.....number....	76	73
Swine.....do.....number....	117	42
Butter.....pounds....	14.61	17.05
Cheese.....pounds....	3.29	1.34
Turnips.....bushels....	.....	7.70
Carrots.....bushels....	.....	0.90

The present condition of Canada is represented, by all accounts we have seen, as the reverse of prosperity. Its trade has been mainly with the United States, for this country is the outlet of its chief industrial products—those of agriculture. The prospect of the stopping of this outlet produces an alarm, resulting in this adversity. In 1863 the total exports of Canada were $37,059,989, of which $15,175,817 were sent to Great Britain, and $20,050,432 to the United

States. For the first six months of 1864, (our reports are not to a nearer date,) the total exports were $11,979,105, of which $3,800,573 were to Great Britain, and $7,722,397 to the United States. The reciprocity of good will on the part of Canada to this country in the hour of its greatest trial has somewhat conflicted with this reciprocity of trade, but to what extent it may have lessened it we have no present means of determining.

The table above is designed to show the great surplus of the agricultural productions of Canada. This exhibition is one of weakness, and not of strength. Of what avail is this perishable surplus if no market can be had for it? Of what earthly use would it be to this country to have such a *per capita* surplus?

The American people have acted more wisely. They have fostered other pursuits, and their energy and talent have created those occupations which give home consumers of agricultural products. And the blessed condition of its agriculture has made the one part consumers to the other; the growers of breadstuffs, and provisions, and animal labor supplying the growers of cotton, and sugar and rice, and in return consuming these products of the south. But Canada has no such domestic market. And having no other population than an agricultural one, it has none but agricultural producers. Hence this vaunted *per capita* surplus.

Let us, to make a just comparison, take one of our agricultural States—as Illinois, which has a large town and city population too—and see how it compares with Canada.

In 1860 this State had a population of 1,711,951, and produced 24,159,500 bushels of wheat, being $14\frac{1}{10}$ bushels *per capita*. That of Canada is $11\frac{40}{100}$ bushels. The same year Illinois raised 115,296,779 bushels of corn, being $67\frac{1}{10}$ *per capita*. That of Canada is $1\frac{7}{100}$. Here is a comparison between like populations. Or if Canada would prefer to be contrasted with more exclusive wheat-growing States, we will bring forward Wisconsin, which in 1860 raised $20\frac{4}{10}$ bushels of wheat *per capita*. These are *our* "life-sustaining products."

Now for "*the purpose*" of this table. It was designed to hold this language to the eastern manufacturer and trader: "You see that Canada has this large cereal surplus production; we can, if the reciprocity treaty is renewed, undersell the western producers, who are further off from you, and subject to heavy transportation charges. We, by supplying you, can keep down the prices of agricultural products grown in your own States. You see that our *interests* are identical; let us consult them by a renewal of this truly reciprocal treaty."

We will answer for the occupations thus specially addressed:

"You see, Mr. Canadians, that if our *per capita* agricultural production is not equal to yours, it is because we have many more occupations than growers of breadstuffs and provisions. Since 1816 the people of the United States have had some knowledge of the meaning of a 'home market.' Our farmers are well content to consume the products of our workshops, if we take their cereals and meats, and raw material—their wool, cotton, flax, and hemp, their coal and iron, and wood. This is our sort of home reciprocity. But you want

to sell to us, without being consumers of these products of our looms, and forges, and anvils. If we buy your products, just to that amount we lessen the consuming capacity of our own farmers, and so, indirectly, we would lose what we might directly gain by buying your cheaper cereals."

We do not know how far this answer may meet the concurrence of the manufacturer and trader; but as the convention of Detroit appointed a committee on agriculture, when not an agriculturist was called to the convention, we suppose our answer for them will not be regarded as more officious.

For the farmer, we answer thus:

"You, Mr. Canada, placed your workshops in Great Britain, and now you find that Russian and Prussian wheat is consumed in preference to your own. Having no home market of your own, and that of Great Britain being as unstable to you as it is to us, you cannot now find a market here, in conflict to us; you must place yourselves in a position of complete equality with us. The States of this Union have no right to lay duties on imports; a treaty of reciprocity must place you in like condition. The farmers of all the States cannot receive any imported goods without first paying duties, for the purpose of sustaining our government. A treaty of reciprocity must place your farmers in like condition, else there will be no reciprocity in the *operation* of a treaty of reciprocity. The duties raise the home prices of our own manufactures; you must consume these, as thus enhanced in price, else your condition and our own will be what it has been in past years—you selling in our market your products but not buying ours in return. The farmer who lives in the west demands unimpeded and unrestricted channels of transportation to the sea-board; a treaty of reciprocity must place your territory in like condition. In a word, the terms of a reciprocity treaty cannot be less in effect as to commercial intercourse than would be a treaty of annexation. As to a treaty of annexation we have nothing to do with, and care less about, a political treaty of that kind. What we have said is to show that no treaty of commerce can be reciprocal which leaves your condition different from that of the farmer of this country."

THE CATTLE PLAGUE.

THE CATTLE PLAGUE AND DISEASED SHEEP IN GREAT BRITAIN.

The *Mark Lane Express* of October 23 contains an account of the loss of sheep by what was regarded as the cattle plague. We condense a portion of the facts, and copy the most material part of the account.

A Mr. Tarrant had purchased 69 sheep at Kingston fair of Mr. Wale, on the 20th of September, and afterwards 40 more of the same person. On Monday after the fair he first observed something the matter with them. On Monday night a lamb died; two died on Wednesday; on Thursday three more; on Friday eight, and on Saturday fourteen. On Thursday morning he separated the 40 last purchased, those sick and dying being of the 69, but these proved

to be diseased on the day following. Of the two lots, 109 in number, 60 only were alive, and of these 20 were affected, when it was determined at a public meeting to indemnify the owner partially, and kill all of them; Mr. J. Duck, a veterinary surgeon, having stated that these sheep showed every symptom of having the cattle plague. The sheep were killed and buried five feet under ground, in lime.

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THE CATTLE PLAGUE IN HOLLAND.

Mr. James Caird writes to the London *Times* from Holland, October 13' relative to this disease as then existing there. From his communication we take the following extract:

"Its commencement is clearly traced to a cargo of cattle returned from England, (the price having been deemed unsatisfactory,) in the beginning of August. When the disease appeared a panic was occasioned, and the animals affected, or exposed to the infection, were killed. As these were fat, or fattening cattle, the remedy did not cause a serious loss. But when the disease spread to the dairy cows, more rational measures were adopted.

"The only case now in which the remedy of destruction is adopted, is when the disease manifests itself suddenly in an isolated place. Then the whole stable is slaughtered, and in many instances that extreme remedy has been found adequate, and the disease has not extended.

"But whenever the disease has shown itself in several herds in the same locality, remedial measures are adopted. Isolation of the individual, and medical treatment according to the symptoms of each, accompanied with cleanliness and warmth, are principles of treatment. No certain specific has been discovered, but a rational treatment, according to varying symptoms, is practiced, with warm clothing and nourishing drinks to sustain the strength. The result of this treatment is that 25 per cent. have recovered. The cows return to milking condition; and there has been no instance of an animal becoming a second time affected.

"The most successful treatment is said to have been by homœopathy. This has been practiced by two Belgian practitioners, who volunteered their services to the Dutch government. By them fifty per cent. of the animals which were sick have been cured, and out of 148 sound animals treated by them with preventive medicines, and placed in contact with diseased cattle, not more than four had taken the disease. The gentlemen are at this moment continuing their practice, and I was assured that, should it prove equally successful on a week's further trial, the results would be made public for the general benefit.

"The contagious character of the disease (however otherwise propagated) is so undoubted that the government have drawn a distinct cordon around a portion of South Holland, within which alone the disease has yet manifested itself, and within which the government are hopeful they may confine it."

MEASURES OF PREVENTION AGAINST THE PLAGUE IN THE UNITED STATES.

The courteous attention of the Secretary of State enables us to place in the monthly report the following communication to him from the United States consul at Manchester, England, suggesting useful measures on the part of this department and co-operating State and local societies to prevent the introduction of the cattle plague in this country and in the Canadian Provinces:

"UNITED STATES CONSULATE,
"*Manchester, October* 17, 1865.

"SIR: I regret to have to report to your excellency that there as yet appears no abatement of the great plague among cattle that has for some weeks past created such alarm in England. The disease threatens to extend to all the agricultural districts in the British islands. Prayer is now made to Almighty God, at morning and evening service, in all the churches, for the stay of this pestilence.

"The plague is mainly confined to horned cattle, but has in a few instances broken out with great virulence in flocks of sheep. The disease is highly contagious, and it may be well worthy of inquiry as to whether there is not danger that it may be transmitted, to the great loss of our country, across the Atlantic. The absolute prohibition of foreign stock for a limited period, or, if that is not advisable, the enforcement of a rigid quarantine upon imported animals during the period of danger, may, perhaps, be proper objects of governmental concern.

"Should neither of the above measures be expedient, then it may be that a circular letter addressed through the Department of Agriculture to the executive officers of all county and State agricultural societies might lead to such a general watchfulness as would tend to the public safety in this respect. There is but little importation of foreign stock into the United States, perhaps not any excepting for breeding purposes; but of this description there are always a few animals in transit between the countries, and at present they cannot be too carefully scrutinized.

"I do not know that hides are imported into the United States from British or continental countries; but, if so, these should be submitted to a process of thorough disinfection at some safe distance. By the importation of hides from Russia the disease is by many supposed to have been introduced into England.

"Should any means for prevention be deemed advisable, they will be more efficient if her Majesty's authorities in the British Provinces shall be willing to concur.

"I am, sir, your obedient servant,

"HY. W. LORD, *Consul.*

"His Excellency W. H. SEWARD,
"*Secretary of State.*"

In regard to the suggestions contained in the foregoing letter, we have but this remark to make: there is but one safety—absolute prohibition of the importation of cattle and sheep, and all parts of them by which the disease might be communicated, from countries in which it is prevailing. The British American Provinces ought to be invited to co-operation, for if once the disease finds its way to them a prevention of its introduction into the United States might be regarded as an impossibility. If the President has not power to fully act in the premises, such power should be given to him at once on the meeting of Congress.

GENERAL POSTPONEMENT OF CATTLE FAIRS IN EUROPE.

The prevalence of the cattle plague in Europe has led to a postponement of the cattle fairs. We are indebted to Mr. Marsh, consul at Altona, for this information. His letter is as follows:

"UNITED STATES CONSULATE,
"*Altona, October* 28, 1865.

"SIR: The cattle plague prevailing throughout the countries of Europe will have a tendency to prevent agricultural exhibitions next year, the various governments having prohibited for a time all importation of cattle into their ports.

"The enclosed circular is to inform you of the postponement of the North German International Agricultural Exhibition, advertised to be held at Altona next year.

"In this section of Germany I have heard of no case of cattle plague, although the English say the disease was imported from Hamburg. So far as my experience serves, the cattle leaving this and the neighboring port of Hamburg are generally in a good and apparently healthy condition. Those brought from the marsh districts of Holstein are among the fattest and finest beef in the world. From the reports I have up to this date, the plague seems most prevalent in the midland counties of England—Yorkshire, Lincolnshire, Nottinghamshire, Cheshire, Staffordshire, and Derbyshire. There are some cases of it in Russia, South Germany, Switzerland, Hanover, and Holland. Should the rinderpest appear here I will inform you.

"I have the honor to remain your obedient servant,

"W. MARSH.

"Hon. ISAAC NEWTON,
"*Commissioner of Agriculture.*"

"NOTICE.

"Owing to numerous reports of the cattle plague prevailing in Europe, the North German International Agricultural Exhibition advertised to be held at Altona next year has been indefinitely postponed.

"WM. MARSH,
"*United States Consul, Secretary.*"

EUROPEAN CROPS AND PRICES.

It is not necessary to quote as fully from the London papers now as we did during the progress of the harvests of Great Britain and the Continent. We will give from them such extracts as will indicate the rise or fall in prices of agricultural products. At present we see no evidences of any near change in the English prices to give hopes of any such advance in the price of wheat as would justify exportation from the United States. But the facts that the cattle disease is still spreading; that the potato rot has prevailed, but to what extent is yet undetermined; that Europe cannot supply the markets of Great Britain with good wheat, and that its own crop is greatly deficient in quality, hold out much encouragement that the exportation of our breadstuffs will be greatly increased during the coming year.

The *Mark Lane Express* of October 23 thus notices the crops and prices:

"The weather of the past week has been in perfect contrast to that which has so long ruled. Frequent rain has fallen, with rough winds and a damp, hazy atmosphere, much against the condition of newly threshed grain. Sow-

ing, which commenced on the after part of last week, has been partially interrupted; but the dryness of the substratum will soon absorb the superficial moisture, and the work be renewed. Although the weather has been against the condition of samples, the markets have still further improved, so that in the past fortnight we may safely estimate the general advance of 24 cents per 480 pounds, while the cattle disease still rages in our midst. America, it appears, is at a yet further remove as respects exports to Europe, the urgent wants of the south and west having been so felt in Canada as to bring up prices to an almost equality with our own. In Paris the fall of rain has caused more activity in the flour trade at full prices, and some of the country markets note an advance in wheat. Rates throughout Belgium and Holland have been well maintained. The Baltic markets generally show a firm aspect, and some places in the interior of Germany have advanced 24 cents per 480 pounds. Supplies of the 1864 crop of Ghirka wheat were arriving at Odessa in very small amounts compared with the past, and the stock of fine old had become so exhausted that rates were rising. The circumstance of a material rise in discount may temporarily check the tendency to advance. So soon as the effects of the cattle murrain begin to tell upon the public, the demand for farinaceous food must be enormous."

The rise in the discount alluded to is the bank rate of interest. This rate is now seven per cent., very high for Great Britain, and indicative of a coming heavy export of specie to the east, for cotton, a quarter from which specie does not return.

The comparative averages of the prices of wheat in Great Britain have been as follows:

1861	56*s.*	3*d.*	=	$13 50	per 480 pounds.
1862	49	6	=	11 88	per 480 pounds.
1863	41	0	=	9 84	per 480 pounds.
1864	38	9	=	9 30	per 480 pounds.
1865	41	11	=	10 06	per 480 pounds.

These figures show some advance in English prices for wheat, but not a material one. The London *Mercantile Gazette* regards the home and continental crops as greater than does the *Mark Lane Express*, which is agricultural; but it concedes that the amount of European wheat on shipment to Great Britain is smaller than usual, although the shipping season from important ports of supply is about closing. It thinks that if the price of fine wheat would reach sixty shillings ($14 40 per 480 pounds) and flour thirty shillings ($7 20) per barrel, a good profit would accrue to shippers from the United States. Of the present supplies and future wants for consumption the *Gazette* says:

"Let it be understood that our position as regards an adequate supply of food is not inferior to most previous years; but the increased consumption going on, and the unusually high quotations paid for meat, clearly demonstrate the necessity of enlarged importations."

The *Mark Lane Express* of October 30 thus notices a further advance of price:

"Notwithstanding the damp weather and generally poor condition of samples the week has brought a further advance of two shillings, (forty-eight cents per 480 pounds,) and in many instances of more, on wheat, and as time wears on, and the condition of the country is considered, we have no doubt of a further

rise taking place. The impracticability of advantageous imports is more fully recognized, and to whatever country we turn the course of prices is on the ascending scale. The slightest improvement in the British isles is a sufficient stimulus to foreign markets, and, as the cattle plague is not peculiar to this country, but seriously felt in Europe, the value of breadstuffs must be proportionally increased. In Paris they are dearer for flour, as the country wheat markets in France come higher, which must soon affect the metropolis. Belgium and Holland still tend upwards, and all along the Baltic the same feeling is apparent. At Dantzic choice new wheat has been sold at fifty-five shillings, ($13 20 per 480 pounds, or $1 65 per bushel,) cost and freight, which is forty-eight cents per 480 pounds over the previous quotations; while Hamburg, Stettin, and Stralsund are severally twenty-four cents per eight bushels dearer. It is the same in Italy, as well as the Danube and Black sea. Kingston (West Canada) advices again show a higher range of prices, with a demand exceeding the supplies for Quebec and the lower ports."

But the following, from the same paper of November 6, presents a more encouraging account of the upward tendency of prices:

"The past week has given us the usual introduction to November, in the way of plentiful fogs, with occasional rain, but there has been dry intervals enough to enable farmers to get in a fair amount of their autumnal sowing, and the turnips since the wet have materially improved. As we anticipated, so markets have fallen out. Neither the pressure of 7 per cent. discount, nor the damp of the period has been able to restrain the upward movement of prices, and a gain of fully two shillings per quarter (48 cents per 480 lbs.,) has been acquired beyond the previous rates. The records of the cattle plague tell us of our weekly losses, and also of fresh outbreaks in localities previously untainted, and without the merciful intervention of Providence, there is no telling to what height the calamity may spread.

"Then the markets on the continent have a continued rising. France, lately the slowest of our neighbors, notes an advance in the country of 1*s.* to 1*s.* 6*d.* per quarter, (24 to 36 cents per 480 lbs.) and in Paris fully 1*s.* Belgium and Holland have followed at the same rate. All the Baltic markets have received a new stimulus upon the receit of English advices, and the former prices, which were relatively above ours, have been exceeded. In Canada the demand has still exceeded supplies, and kept the averages at a high range, but in New York some reaction has ensued, the continued absence of export orders, causing a failure in the extent of business, and rates have consequently declined both for flour and wheat, but not sufficiently so for the execution of English orders. In the mean time winter is steadily approaching, and there are sufficient indications of only a very small business before the end of next year."

The price of wheat in the end of October at Mark Lane was 42*s.* 4*d.* per quarter, or $10 16 per 480 pounds, or $1 27 per American bushel.

BREADSTUFFS, PROVISIONS, AND PRICES.

In commercial language the word "breadstuffs" applies to those *cereals* that are used as human food, and the flour that is manufactured from them. And the word "provisions" has reference to *animal* food, and includes pork and beef, (salted,) bacon, lard, butter, and cheese. The supply of the first is usually dependent on the seasons and the demand. The cereals are easily increased ordinarily by an increase of the amount sown or planted. But not so with

provisions. It requires some years to grow cattle, and two to grow and market hogs. The causes of the present demand and increased prices for these are not so readily seen as those operating on the market values of breadstuffs. Hence, even among commercial papers, these causes are not understood. They seem to view the present high prices of meats as a wrong. They look to an existing large crop of corn only, and do not go beyond it to see whether there are hogs and cattle to grow fat upon it. Some of them regard the high prices for these as the result of unwise speculation; others, as the result of an increase in the currency. In another article we have shown that the high prices for provisions are legitimate, because they result from the law of supply and demand. But why is the supply so limited?

As to hogs, it had its origin in the destruction of the corn crop in 1863, by the freezing weather of August 30 and September 18. The scarcity was so great that, in the following winter, many farmers had to abandon their stock hogs to the chances of surviving it by feeding on roots which the woods and fields might give to them. Of course most of them perished. The demand for wool and sheep induced farmers to give their entire attention to growing and increasing the latter. For the last twenty months we urged the importance of greater attention to other farm stock, seeing, very clearly, the scarcity that now exists if they did not. But the high price of corn in 1864, created by the demands of the war, and the short corn crop of that year, caused farmers to sell their corn. But we thought then that a portion should have been used in the increase of hogs, and often urged attention to their increase.

As this department, from its extensive correspondence, can see the entire agricultural condition of the country, its tendency to over-production of any one commodity, and neglect of others, which do not present so strong present inducements to their increase, it was the duty of the department to indicate what the future would be, and to counsel farmers how to shape their industry for that future. This we did. But the desire for present gain was stronger than the counsel we gave.

The prices last year at Bloomington, Illinois, were—oats, 55 cents; wheat, $1 40; rye, 90 cents; barley, $1 20; corn, 75 cents per bushel, each, now about 50 per cent less. Here is, indeed, a great falling off. This year the supply is much greater, and the war demand has ceased. This demand we estimated in our February report at 23 per cent. in 1863. The farmer will here see the *causes* of this fall in prices of breadstuffs. But the great scarcity of meats upholds prices for hogs and cattle. Had the counsel of the monthly report been followed, the supply of hogs would have been much greater, and in two years (by 1867) that of cattle would have been ample. There is not sufficient stock for present wants, either for meats, or for the consumption of the corn, oats, and hay crops, and hence the greater depression in the prices of these stock-supporting products.

These changes in prices are keenly felt by farmers, for the scarcity of labor has so enhanced its value during the past year that present prices of products are not "paying."

MONTANA TERRITORY.

About the 46th degree of north latitude, and nearly half way between the mouth of the Columbia river and the middle of the western boundary of Minnesota, lies the Territory of Montana. Here the Yellowstone, Missouri, and Columbia rivers take their rise in the valleys, which are separated by high mountains. Though lying in a region so elevated, and in so high a latitude, yet the climate is most delightful, as the reader will see from the following letter, written to the Commissioner of Agriculture by the postmaster at Bannock City:

BANNOCK CITY, *September* 28, 1865.

SIR: Perhaps a few lines concerning the agricultural resources of this far-off and mountainous country may be interesting to your department. This Territory, as can be seen by turning to the map of the United States, is situate upon and includes the headwaters of the Missouri, Yellowstone, and Columbia rivers. I will first say something about the *soil* for agricultural purposes. In all the valleys of any extent it is very fertile, being mostly a black loam near the rivers or streams, and on going back from them, into what is here called the bench or plateau, the soil is usually a light-colored gravel, and is very productive. As a general thing, farmers will be obliged to irrigate their farms; but this, in most of the valleys, is very easily done. The fall of the streams is so great that the water is readily turned out of its original channel and carried in ditches wherever the farmer wishes. The Bitterroot valley, in Missoula county, is a large valley and very fertile, in which farmers can raise any kind of crop that can be grown in Minnesota or Wisconsin. The Gallatin, Yellowstone, Jefferson, Madison, and Hellgate valleys are equally as productive.

The *climate* of the valleys is very fine, both winter and summer. Rain seldom falls in the summer, and snow in the winter hardly ever falls to exceed two or three inches in depth, and soon melts away under the bright winter sun. Cattle and horses live and grow fat during the whole winter on grass alone. But few farmers make any preparation for feeding stock in the winter, nor do they provide any shelter but such as nature has furnished. The water is pure and clear and cold. Mountain trout can be caught in abundance in all the creeks and rivulets. Moose, deer, elk, and antelope are plenty in many places. The European grasses, such as clover and timothy, are indigenous to the country, and can be found growing wild in almost every valley. All the hardier kinds of fruits can be raised here with very little trouble or expense. I have seen as fine garden vegetables raised in this Territory as I ever saw in any of the eastern or western States. Wheat, oats, barley, and rye grow luxuriantly. In no part of the United States can wheat of a better quality be raised, or more to the acre. The markets are good—all kinds of grain and vegetables command a high price in gold. In fact, I know of no place in the wide world, taking all things into consideration, that is more inviting to the farmer. Any prudent and industrious man can within a few years get rich by farming alone. It will not be necessary that he should dig in the mines for gold. But there is a great want of garden seeds of a good quality and of the proper varieties for this climate. Please send a quantity of them by mail to this office, and I will see that they are properly distributed.

Stepping down along the 113th degree of longitude to southern Utah, we will come to the place from which the following letter was written. It is somewhat old in date, but, for all that, most interesting, as giving us pleasant views

of a country now being first brought into cultivation, and showing, as does the preceding letter, how great a degree of energy and intelligence is finding a home in these distant places.

ST. GEORGE, SOUTHERN UTAH, *June* 12, 1865.

SIR: This location is about 300 miles nearly due south from Great Salt Lake City. I came here three weeks since for the purpose of establishing propagating gardens, nurseries, vineyards, &c. I find these valleys surrounded by ridges of black volcanic rock and table mountains of red crumbling sandstone, impregnated, more or less, with mineral, and all the streams and springs of water a little brackish or alkali, and never very cool. The soil is generally reddish, except in low places; where vegetable mould has accumulated, it is black; composed of clay and sand. It looks very poor, but is enriched by some unseen chemical or mineral, though in many places the alkaline mineral coats or incrusts the soil, making it unfit for any horticultural use. The climate is very mild in winter, snow appearing very seldom. The heat in summer is rather severe for one of northern origin, the mercury often marking 100° in the shade. To-day it is 90°. Grapes grow and fruit luxuriantly, the hardier varieties being of large size and excellent flavor, the tender sometimes killing by frost and sprouting from stubs. I have seen one vine of the Hamburg loaded with fruit, which is half grown now. Peaches, apricots, plums, pears and almonds also do well and make fine fruit. Apples seem not so well adapted to the climate. Figs and pomegranates grow finely, but are rather tender for exposed situations. Wheat is now being harvested. Early corn is in tassel, (though of the latter the main crop is not yet planted.) Sorghum and tobacco grow well, as do most all cereals, root crops, and tubers, except the common potato, which can scarce stand the climate, but is grown to perfection on the mountains near by.

This place has been settled but three years; consequently but little is known of the resources or capacity of the soil, climate, and natural advantages. One thing is certain, however, to my mind; this will soon be a region noted for its abundance and excellence of fruits, especially the grape. All lands cultivated have to be irrigated. Grapes, hops and other vines grow in native state in abundance. Several kinds of delicious wild berries are found in this region; also some flowering shrubs—new, beautiful, and rare to me. Some magnificent wild flowers, some new, and others such as are generally cultivated. The yucca and cactus in their various forms are really grand. Next autumn I intend commencing to start an herbarium, to include all native plants, and imported medicinal ones. I shall take pleasure in fowarding to you through the mail and otherwise anything native here you may desire.

I have had the honor to have been set apart and selected as a missionary to establish experimental propagating gardens here, and as fast as possible ascertain what good things we can produce here. I shall be very thankful for such contributions as you may find it convenient to make. I brought from my gardens at Spring Lake villa specimens of such as I had, and shall make further additions next October. A great difficulty we labor under here now is, that letter postage is required for all seeds, roots, cuttings, &c., which will make your favors doubly valuable. In October I hope you will find it convenient to send me roots of many desirable grapes, including the Hamburg, and some desirable for drying; also roses, tea plants, flowering shrubs, bulbs, &c.—in fact, almost anything but the most ordinary sorts of strawberries and apples. I think with a little protection tea will flourish here, and I am anxious to try it as early as possible.

I shall be pleased to furnish you all information you wish respecting this strange region of volcanoes and natural wonders. I hope I shall hear from you often.

I have not disposed of my Spring Lake villa estate, and as the mails are rather irregular here as yet, please send to former address as above until further advice. I forgot to note that this place is at the junction of the Rio Virgin and Santa Clara rivers, and about 75 to 100 miles from the Colorado—a little over 100 miles from the head of navigation on that stream.

I am, sir, your most obedient,

J. E. JOHNSON.

THE AMOUNT OF THE FALL CROPS.

The tables which follow exhibit the general averages for the States named of the returns of the regular correspondents, made on the first day of November, of the amounts in tenths, and of the injuries in tenths of the fall harvested crops for 1865. Table A shows these averages, and table B the amount in bushels as calculated from the returns in table A.

The attention of our readers, and especially of the press, is called to the comments which always follow these and like tables; for these comments are designed to state facts, a knowledge of which are often essential to a proper understanding of the tables.

Table A, showing the State averages, in tenths, to the questions asked of correspondents in each of the counties.

States.	CORN.		SORGHUM.		BUCKWHEAT.		POTATOES.		COTTON.	
	Average amount of crop compared with 1864.	Injury to same from all causes.	Average amount of crop compared with 1864.	Injury to same from all causes.	Average amount of crop compared with 1864.	Injury to same from all causes.	Average amount of crop compared with 1864.	Injury to same from all causes.	Average amount of crop compared with 1864.	Injury to same from all causes.
Maine	12	7 3/4	.....	.....	10 1/6	9 1/2	7 1/2	11 10/13	.....	.....
New Hampshire	11	8 6/7	.....	.....	8 4/7	10 3/7	8 2/7	10 3/7	.....	.....
Vermont	11 1/8	9 1/6	10	10	10	10	9 1/8	10 1/8	.....	.....
Massachusetts	10 4/11	7 4/11	10	10 1/3	8 3/8	11 1/3	9	11	.....	.....
Rhode Island	10 1/2	10	.....	.....	.....	.....	10	10	.....	.....
Connecticut	11	9 1/4	10 1/3	9 1/3	7 3/4	12	8 1/2	11 1/2	.....	.....
New York	11 1/5	8 1/2	12 5/7	8 3/5	9 3/4	8	10 1/6	8 3/4	.....	.....
New Jersey	11 1/2	8 1/3	10 7/11	9 1/3	8 1/2	10	10 1/8	10	.....	.....
Pennsylvania	12 1/2	8 1/3	11	9 3/5	9 1/2	11	9 1/2	11 1/3	.....	.....
Maryland	13 8/13	8 3/5	11 5/8	8 1/5	8 3/8	12	12	9	10 1/8	10
Delaware	10	10	13 1/2	8	10	8	11	6	10	.....
Kentucky	13 3/7	8 1/2	13 3/5	9	9 1/2	10	11 1/9	10 3/8	12	9 6/16
Ohio	13 4/5	8 1/3	12 3/8	9 1/3	10 1/4	9 4/5	9 1/2	11	10 1/2	10
Michigan	15 4/5	9 1/3	15	9	13 4/5	8	16	8 0/13	.....	.....
Indiana	15 5/8	8	14	8 1/4	11	9 3/4	12 1/7	8 1/6	10	9 1/3
Illinois	12 4/5	8 3/10	12 1/6	8 4/9	10 1/4	10 3/11	13	10 1/5	10 3/4	10
Missouri	14 1/5	9	13 1/4	9	10	10	14 3/8	9 1/4	11 1/8	10
Wisconsin	13 1/8	8 3/8	13 3/8	9	11 3/8	10	13 3/4	10 1/2	10	10
Iowa	11 2/5	8 1/2	13 1/9	9 1/3	10 4/5	10	13 1/3	9 1/2	13 1/3	7 1/2
Minnesota	12	10 3/8	9 1/2	11	11 1/6	9 1/2	15	9 7/8	.....	.....
Kansas	14 2/5	7 1/2	14 1/2	6 1/2	10	10	15	6 3/4	10	10
West Virginia	13 3/4	9 3/5	12 1/5	10	10 1/4	10	10	11 1/4	10	10
Nebraska Territory	18 1/4	8 1/4	15 1/11	9 1/9	10	8 3/4	16 1/5	13	10 2/7	10

Table A, showing the State averages in tenths, &c.—Continued.

States.	TOBACCO.		PEAS.		BEANS.		FLAXSEED AND LINT.		WEATHER FOR OCT.					
	Average amount of crop compared with 1864.	Injury to same from all causes.	Average amount of crop compared with 1864.	Injury to same from all causes.	Average amount of crop compared with 1864.	Injury to same from all causes.	Average amount of seed compared with 1864.	Average amount of lint compared with 1864.	Weeks: Favorable, wet, very wet, dry, very dry, frost.					
									Fav.	Wet.	Very wet.	Dry.	Very dry.	Frost.
Maine	10 2/5	9 1/3	10 1/5	9 3/4	10 1/0	9 1/2	11	10 3/8	7	6	0	19	16	4
New Hampshire	9	8 1/5	10 1/0	8 1/6	10 4/7	10 1/7	10 3/8	11	9	3	0	9	0	7
Vermont	10	10 1/8	10 3/8	9 1/8	10 1/0	9 4/5	10 1/4	9 1/2	10	7	0	3	0	4
Massachusetts	8 1/2	10	9 3/4	10 5/8	10 1/2	10	.....	.....	11	8	0	11	6	4
Rhode Island	8	10	10	10	10	10	.....	.....	2	2	0	0	4	0
Connecticut	8 1/4	10	10	10	10	10	10	10	1	2	0	6	6	1
New York	9 1/6	11	10	8 5/8	9 1/9	8 4/7	10 1/2	10 1/4	45	50	29	0	6	16
New Jersey	9 1/2	10	10 1/2	10 5/6	10 3/10	10 3/8	9 1/2	9	13	5	2	12	7	1
Pennsylvania	9	8 1/4	10	10	9 3/8	10 1/2	10 4/7	10 1/8	77	28	1	25	2	15
Maryland	9	8 1/3	10 2/7	9 1/2	10 3/8	9 1/2	10 4/5	11 1/5	16	3	0	3	22	2
Delaware	5	8	9	11 1/2	10	8	7 1/2	8 1/2	2	3	0	2	1	0
Kentucky	9 1/2	12	10 1/6	9 7/8	10 1/3	10	10 1/2	9 5/9	47	7	0	34	3	9
Ohio	9	11	10	10	10	10 8/10	9 1/2	10	97	26	0	39	11	12
Michigan	11	10 5/13	12	9 13/20	12	9 1/8	10 3/7	10 3/7	75	23	6	13	0	14
Indiana	9 3/4	9 7/11	10 1/2	9 10/11	10 1/2	10	9	9	108	29	0	44	0	9
Illinois	10	10 3/7	10	10 1/5	9 1/2	10 1/2	10	10 1/0	81	51	19	38	4	12
Missouri	11 1/8	9 4/5	9	10	11	10	10	9 6/7	45	22	4	18	1	5
Wisconsin	11	10 1/7	11 2/5	9 1/4	10 1/4	9 3/4	12 2/11	12 1/5	50	44	8	28	2	12
Iowa	10 3/4	10 1/10	10 1/2	10	10 2/5	9 4/7	9 1/8	10 1/2	83	51	28	28	2	9
Minnesota	8 3/8	11 1/7	12	9 2/5	11 1/3	10 1/4	11	11 1/6	39	9	2	3	0	10
Kansas	10	9 3/8	11 1/4	10	14	8	10	10	9	5	0	6	0	4
West Virginia	10 1/2	10 1/6	10 3/5	10	8 3/8	10	10 3/8	10 1/3	17	8	0	6	5	4
Nebraska Ter	11 1/7	10 3/8	10 1/2	10 3/4	11 1/3	10 1/10	10	9 1/2	13	11	2	11	1	2
									857	403	101	358	99	156

Table B, showing the amount of corn, in bushels, as estimated from the returns in the preceding table.

States.	CORN.				
	1860.	1862.	1863.	1864.	1865.
	Bushels.	*Bushels.*	*Bushels.*	*Bushels.*	*Bushels.*
Maine	1,546,071	1,855,285	1,855,285	1,410,017	1,692,020
New Hampshire	1,414,628	1,668,285	1,835,113	1,334,628	1,468,090
Vermont	1,463,020	1,585,020	1,743,522	1,585,020	1,796,356
Massachusetts	2,157,063	2,465,215	2,465,215	2,280,324	2,363,245
Rhode Island	458,912	458,912	413,021	474,208	497,918
Connecticut	2,059,835	2,059,835	2,059,835	2,059,835	2,265,818
New York	20,061,048	24,073,257	24,073,257	22,628,862	25,344,325
New Jersey	9,723,336	10,023,336	11,025,669	8,464,262	9,733,901
Pennsylvania	28,196,821	30,721,821	30,721,821	28,381,685	35,477,106
Maryland	13,444,922	14,444,922	14,444,922	10,509,243	14,308,739
Delaware	3,892,337	3,892,337	3,892,337	3,892,337	3,892,337
Kentucky	64,043,633	48,032,725	52,835,997	48,828,706	57,512,833
Ohio	70,637,140	71,792,253	57,433,802	68,202,641	94,119,644
Michigan	12,152,110	15,190,137	10,633,097	11,088,801	17,520,305
Indiana	69,641,591	92 855,454	54,602,273	74,284,363	116,069,316
Illinois	115,296,778	138,356,135	83,013,681	138,356,135	177,095,852
Missouri	72,892,157	54,679,118	43,743,295	36,635,011	52,021,715
Wisconsin	7,565,290	10,087,053	8,069,642	10,087,053	13,449,405
Iowa	41,116,994	49,340,393	34,538,276	55,261,240	62,997,813
Minnesota	2,987,570	3,983,426	2,756,898	4,647,329	5,577,795
Kansas	5,678,834	6,814,601	8,518,251	4,673,081	6,729,236
Nebraska Territory	1,482,080	1,846,785	1,292,750	1,366,622	2,494,084
Total	547,987,737	586,226,305	451,967,959	530 581,403	704,427,853

Table B, showing the amount of tobacco, in pounds, as estimated from the returns in the preceding table.

States.	TOBACCO.				
	1860.	1862.	1863.	1864.	1865.
	Pounds.	*Pounds.*	*Pounds.*	*Pounds.*	*Pounds.*
Maine	1,583	.....	7,000	.....	7,280
New Hampshire	21,281	.....	50,000	64,000	57,600
Vermont	12,153	.....	40,000	59,000	59,000
Massachusetts	3,233,198	4,041,497	5,200,000	6,760,000	5,746,000
Rhode Island	705	.....	1,680	1,848	1,479
Connecticut	6,000,133	7,550,166	7,500,166	9,900,218	8,167,681
New York	5,764,582	7,205,727	10,088,017	12,912,662	11,836,607
New Jersey	149,485	.....	194,330	179,755	170,768
Pennsylvania	3,181,586	3,976,982	5,567,774	6,124,551	5,512,096
Maryland	38,410,865	40,601,179	48,721,415	33,292,968	29,963,672
Delaware	9,699	12,123	15,618	14,057	7,029
Kentucky	108,102,433	.....	113,912,938	56,956,469	54,108,646
Ohio	25,528,972	25,528,972	28,081,869	29,017,931	26,116,138
Michigan	120,621	160,825	207,061	248,473	273,320
Indiana	7,246,132	9,057,665	10,416,314	8,767,065	8,547,889
Illinois	7,014,230	9,452,307	20,397,537	18,867,722	18,867,722
Missouri	25,086,196	28,609,948	26,340,505	13,697,063	15,237,982
Wisconsin	87,595	109,493	153,189	148,083	162,891
Iowa	312,919	375,502	300,402	390,522	419,811
Minnesota	38,510	48,137	43,324	34,659	30,029
Kansas	16,978	21,223	26,881	22,043	22,043
Nebraska Territory	3,636	.....	1,900	1,140	1,270
Total	230,343,802	136,751,746	267,267,920	197,468,229	185,316,953

Table B, showing the amount of buckwheat, in bushels, as estimated from the returns in the preceding table.

States.	BUCKWHEAT.				
	1860.	1862.	1863.	1864.	1865.
	Bushels.	*Bushels.*	*Bushels.*	*Bushels.*	*Bushels.*
Maine	339,520	452,693	407,424	350,837	356,684
New Hampshire	89,996	98,995	98,995	87,447	74,956
Vermont	215,821	233,906	233,906	210,516	210,516
Massachusetts	123,202	123,302	123,302	110,972	96,176
Rhode Island	3,573	3,871	3,871	3,097	3,097
Connecticut	309,107	334,032	300,629	387,477	300,545
New York	5,126,305	5,976,305	5,378,675	5,677,490	5,535,553
New Jersey	877,386	1,052,863	947,577	921,256	783,069
Pennsylvania	5,572,026	6,686,431	5,794,907	7,577,955	7,199,058
Maryland	212,338	242,672	218,405	189,285	164,048
Delaware	16,355	18,399	18,399	15,641	15,641
Kentucky	18,929	14,187	14,187	14,187	13,478
Ohio	2,327,005	1,181,947	827,364	1,300,141	1,332,645
Michigan	600,435	900,652	630,457	823,453	1,136,365
Indiana	367,797	367,797	183,898	272,171	299,388
Illinois	345,069	431,336	258,802	280,370	287,379
Missouri	182,292	136,719	95,703	72,461	72,461
Wisconsin	67,628	84,527	59,170	73,258	85,466
Iowa	216,524	276,524	155,914	276,524	298,646
Minnesota	27,677	34,596	20,758	31,714	35,414
Kansas	36,799	44,158	27,966	24,288	24,288
Nebraska Territory	12,224	12,329	6,146	.....	6,146
Total	17,090,687	18,708,145	15,806,455	18,700,540	18,331,019

Table B, showing the amount of potatoes, in bushels, as estimated from the returns in the preceding table.

States.	POTATOES.				
	1860.	1862.	1863.	1864.	1865.
	Bushels.	*Bushels.*	*Bushels.*	*Bushels.*	*Bushels.*
Maine	6,376,052	7,437,053	6,693,348	7,189,151	5,391,864
New Hampshire	4,137,704	4,137,704	3,310,163	3,842,154	3,183,500
Vermont	5,148,531	5,148,531	3,603,972	5,920,810	5,526,089
Massachusetts	3,202,517	3,201,901	2,881,711	3,384,878	3,046,391
Rhode Island	543,855	543,855	435,084	525,727	525,727
Connecticut	1,855,858	1,833,148	2,016,462	1,833,148	1,558,177
New York	26,454,912	33,059,235	29,753,393	29,753,312	30,249,200
New Jersey	5,206,522	4,693,151	4,693,151	3,989,179	4,122,151
Pennsylvania	11,790,658	14,609,335	14,609,335	12,661,424	12,028,353
Maryland	1,288,173	1,517,134	1,213,707	1,061,994	1,274,393
Delaware	520,144	377,931	302,345	327,540	360,294
Kentucky	2,814,090	1,131,739	1,449,138	1,255,921	1,395,468
Ohio	9,050,781	5,128,756	4,103,005	4,615,881	4,385,087
Michigan	5,301,018	5,264,733	4,738,260	3,422,078	5,475,324
Indiana	4,157,434	4,357,271	3,485,617	2,904,847	3,527,314
Illinois	6,141,407	6,444,404	5,155,523	4,511,083	5,864,408
Missouri	2,325,952	1,493,519	1,493,519	776,630	1,139,057
Wisconsin	3,850,850	4,840,631	4,356,568	3,582,068	4,925,341
Iowa	2,751,553	3,600,686	2,880,549	2,520,481	3,360,641
Minnesota	2,028,726	2,703,926	2,433,534	2,163,141	3,244,711
Kansas	293,189	354,960	425,952	184,480	276,720
Nebraska Territory	162,188	169,762	124,334	106,102	171,885
Total	105,694,149	113,234,644	100,158,670	96,256,888	101,032,095

COMMENTS ON THE PRECEDING TABLES.

Corn.—Our national crop; and never before so magnificent! The column of figures that records its greatness glows with a beauty that can be properly appreciated only by a farmer and a statistician. Every crib full to its utmost capacity, and every farmer seeking for stock to consume it. Ah! it would have been well if he had heeded our earnest appeals during the last two years to increase every kind of farm stock. How much does this nation now lose for want of an abundant hog crop to supply the demands for provisions that, at reasonable prices, would have come from Europe, now suffering from the cattle plague!

But look at that crop. An increase over last year's of 173,846,450 bushels—nearly 33 per cent. Indiana and Illinois, under a favorable season, have shown the character of their lands and of their industry. More than a third of this great crop has been raised by those States: Illinois makes a gain of 38,739,717 bushels, and Indiana, which has suffered so much from unfavorable seasons the past two years, now gains 41,784,953 bushels. The gain of these two States is 80,524,670 bushels—an amount equal to the entire corn production of Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, and Pennsylvania. The spirit of Hiawatha must surely have its home in those two States.

Tobacco.—Many circumstances referred to heretofore, but more particularly the apprehension of an internal revenue tax on the leaf, have occasioned a decrease in the planting of this crop. The first part of the growing season was most unfavorable; but the late rains were so beneficial that the product is much beyond what it was supposed could be possible. The decrease of the present crop, compared with last year, is 12,151,276 pounds, and compared with the crop of 1863 it is 81,950,967 pounds. Missouri is the only State that has made a gain.

Buckwheat.—The amount sown of this crop was slightly in advance of last year. In New York it was $10\frac{2}{3}$ tenths; Pennsylvania, $10\frac{1}{9}$; Ohio, $9\frac{3}{5}$; Michigan, $11\frac{3}{11}$; and Indiana, $10\frac{2}{3}$. In the western States the crop has increased; but is reduced in the eastern, and principally in New York and Pennsylvania. The whole crop of 1865 is 369,521 bushels below that of last year.

Potatoes.—The planting this year was greater in nearly every State, but not much so; and there is a gain in many States, particularly the western. But the drought was unfavorable to it in the eastern States; and hence the entire gain is not as great as it otherwise would have been. But it is greater than expected; for the warm, moist weather caused rot in many places. The increase this year is 4,775,207 bushels over the crop of 1864, but is 12,202,549 bushels less than the crop of 1862. The increase in Michigan is very large.

The above crops are those for which we have a basis upon which to estimate their amount in bushels or pounds; but the following are not thus estimated, and their amount is shown only in tenths. The figures 10 represent the crops of 1864, and 11 or $13\frac{1}{2}$ mean one-tenth or three and a half tenths greater than the crop of last year. So 9 means one-tenth less than the same crop.

Sorghum.—Referring to table A, it will be seen that the increase of this crop is most gratifying. Minnesota is the only State that shows a slight decrease—a half of one-tenth. Some of its counties have made a large increase, but others have fallen considerably below last year's product; but in nearly all the States there has been a large increase, ranging from a third of a tenth to five-tenths. In another place we have noticed the quality of the molasses, the increase in the sale of mills, and the progressing hope that sugar will ultimately be made from the sorghum.

Cotton.—The season has been favorable, but it is not grown to any extent in the northern or western States. The long season has aided much the opening

of the pods; but with the exception of Kentucky and southern Illinois and Missouri, this crop cannot be of profitable cultivation.

Peas and beans.—These crops are favorable, but do not show any material increase.

Flaxseed and lint.—In many localities the season was unfavorable; but while both are nearly equal to the product of last year, it is obvious that the growth of flax has not taken hold as was at one time expected it would. The fact that flax-cotton has not as yet been a practical success leads farmers to give their chief attention to wool production as a means of supplying the want of cotton. With the return of cotton production in the southern States there is more fear that this crop will be decreasing than hope of its increase.

Weather.—The month of October was highly favorable for the gathering of the crops—saving of corn fodder, &c. The weeks of "favorable" weather have been almost equal to all others, and the "wet," "dry," and "frost" have alternated with the "favorable" very advantageously.

A general summary.—In closing our "account current" with the crops of 1865 it is proper that we present them altogether, especially in view of the approaching thanksgiving. And truly may we rejoice and offer up thanks; for never before has the farmer's labor been so abundantly rewarded. Peace and plenty have crowned the year 1865. May the pestilences that so fearfully destroy elsewhere be kept from this country. Henceforth the industrial masses will see that they are never again arrayed against each other in fraternal strife by those who would lead them. Their labor shall save the country from famine; their political action will guard it from future civil strife; let those upon whom devolves the duty of shielding it from pestilence be equally as faithful to the trusts committed to their charge.

General summary of the crops of 1865 *for the northern and western States, and not embracing the southern.*

Products.	1865.	1864.	1863.
Wheat.....bushels..	148,522,829	160,695,823	179,404,036
Rye.....bushels..	19,543,905	19,872,975	20,782,782
Barley.....bushels..	11,391,286	10,632,178	11,368,155
Oats.....bushels..	225,252,295	176,690,064	173,800,575
Corn.....bushels..	704,427,853	530,581,403	451,967,959
Buckwheat.....bushels..	18,331,019	18,700,540	15,806,455
Potatoes.....bushels..	101,032,095	96,256,888	100,158,670
Total bushels.....	1,228,501,282	1,013,429,871	953,288,632
Hay.....tons..	23,538,740	18,116,751	19,736,847
Tobacco.....pounds..	185,316,953	197,468,229	267,267,920

Quality of the crops of 1865.—In the August report the deficiency in the *wheat* crop was estimated at 26,241,698 bushels. This estimate embraces both the *quantity* and *quality*, for its object was to show the *difference* between the crops of 1864 and 1865. The *quantity* alone makes a deficit of 12,172,994 bushels, and it is a low estimate to place the deficiency in *quality* between fourteen and fifteen millions of bushels; for, in the heaviest producing States, the crop of this year is very inferior as to quality. Several commercial papers have made items of these two accounts, and, overlooking the differences in the estimates, have represented them as contradictory. As the crop of 1865, in

bushels, will become a basis of next year's estimates, it was necessary to separate, in the final returns, the quantity from the quality.

The *quality* of the corn is as superior as is the amount over last year's product. It is certainly a fact that the average *quality* of the cereal crops of this year is much in advance of the quality of the crops of 1864. What more could be desired? In amount, the cereal and potato crops of 1865 exceed those of 1864 by 215,071,411 bushels.

EXPORTS AND PRICES OF FARM PRODUCE.

Exports from New York of the leading agricultural products from January 1 to November 15, 1865, compared with those for the same time in 1864, and their prices in New York and Chicago.

Articles.	From Jan. 1 to Nov. 15, 1865.	From Jan. 1 to Nov. 15, 1864.	Prices Nov. 15, 1865—New York.	Prices Nov. 15, 1865—Chicago.
Wheat flour....bbls.	1,214,378	1,764,342	$7 75 to $12 10	$5 00 to $11 00
Rye flour.....bbls.	2,278	2,667	.....	5 50 to 5 85
Corn meal.....bbls.	115,656	97,376	.....	.....
Wheat .....bush.	1,947,424	11,982,576	1 78 to 2 45	1 13 to 1 48
Corn..... .....bush.	3,276,163	814,608	92 to 93½	50½ to 54
Rye .....bush.	170,694	453	.....	58 to 63
Barley .....bush.	.....	150	1 12 to 1 28	75 to 1 40
Oats .....bush.	69,831	39,643	60 to 63	28½ to 33
Peas.....bush.	63,731	176,770	.....	.....
Cotton.....bales.	149,512	25,657	50 middling	.....
Hay.....bales.	31,730	35,307	60 to 85	85 to 90
Hops .....bales.	13,382	18,534	20 to 65	45 to 50
Leaf tobacco...hhds.	71,627	77,609	7 to 23	.....
Leaf tobacco ..pkgs.	71,669	62,269	.....	.....
Manf. tobacco...lbs.	3,785,482	4,531,695	.....	.....
Petroleum ....galls.	11,392,524	19,702,052	62	.....
Pork .....bbls.	107,346	120,589	33 12½ to 33 62½	32 00 to 34 00
Beef .....bbls.	38,452	33,069	11 00 to 17 00	15 00 to 18 00
Beef .....tierces.	44,575	44,987	.....	.....
Cut meats .....lbs.	31,418,950	88,648,772	15½ to 22	16 to 21
Butter .....lbs.	9,368,624	12,293,131	30 to 53	27 to 40
Cheese .....lbs.	37,104,406	43,501,686	15 to 19	15 to 18
Lard .....lbs.	20,873,669	50,519,838	24⅓ to 28¾	27 to 28
Tallow .....lbs.	14,395,593	29,426,936	14¼ to 14⅝	13½ to 15
Wool, fleece.....lbs.	.....	.....	50 to 65	50 to 65

METEOROLOGY.

OCTOBER, 1865.

Table showing the highest and lowest range of the thermometer, (with dates prefixed,) the mean temperature, and amount of rain, (in inches and tenths,) for October, 1865, at the following places, as given by the observers named. The daily observations were made at 7 o'clock a. m. and 2 and 9 p. m.

Place.	County.	Observer's name.	Date.	Max.	Date.	Min.	Mean.	Rain.
MAINE.								
				°		°	°	*In.*
Steuben	Washington	J. D. Parker	1	65	30	25	43.5	4.90
Lee	Penobscot	Edwin Pitman	1	66	27	17	43.8	3.90
West Waterville	Kennebec	B. F. Wilbur	1	70	31	22	44.4	3.35
Gardiner	....do	R. H. Gardiner	1	69	25	25	44.0	4.75
Lisbon	Androscoggin	Asa P. Moore	.....	.....	.....	.....	.....	4.13
Standish	Cumberland	John P. Moulton	2	76	24, 27	26	44.9	4.63
Cornish	York	Silas West	1	68	24, 25	23	42.2	4.20
Cornishville	....do	G. W. Guptill	1	70	27	25	43.9	4.72
NEW HAMPSHIRE.								
Stratford	Coos	Branch Brown	1	63	25	18	38.5	2.42
Shelburne	....do	Fletcher Odell	1	70	31	18	42.1	.....
North Barnstead	Belknap	Chas. H. Pitman	1	75	27	26	45.3	4.44
Concord	Merrimack	John T. Wheeler	1	70	25	22	45.7	4.90
Claremont	Sullivan	S. O. Mead	1	72	24, 25	22	42.0	.....
Do	....do	Arthur Chase	1	70	24	23	44.0	5.78
VERMONT.								
Lunenburg	Essex	Hiram A. Cutting	19	65	26	16	37.4	3.05
Craftsbury	Orleans	Jas. A. Paddock	1, 19	58	25, 27	22	38.1	2.71
Middlebury	Addison	H. A. Sheldon	1	64	25	25	43.4	3.30
Brandon	Rutland	Harmon Buckland	1	68	24	24	44.1	3.68
MASSACHUSETTS.								
Topsfield	Essex	A. M. Merriam	1	74	24	29	48.2	6.26
Georgetown	....do	Henry M. Nelson	1	76	30	27	46.1	.....
Newbury	....do	Jno. H. Caldwell	1	71	25	29	46.3	.....
Cambridge	Middlesex	Aug. Fendler	1	74	24	26	46.7	.....
New Bedford	Bristol	Samuel Rodman	10	78	30	33	51.9	4.83
Worcester	Worcester	Joseph Draper, M.D.	1	71	30	29	47.4	4.41
Mendon	....do	Jno. G. Metcalf, M.D.	1	73	23, 30	28	48.3	6.25
Baldwinsville	....do	Rev. E. Dewhurst	1	67	25	23	.....	5.48
Amherst	Hampshire	Prof. E. Snell	1	72	24	24	46.0	4.98
Springfield	Hampden	J. Weatherhead	10	78	24, 25	25	47.3	4.57

Table showing the range of the thermometer, &c., for October—Continued.

Place.	County.	Observer's name.	Date.	Max.	Date.	Min.	Mean.	Rain.
MASSACHUSETTS—Continued.				°		°	°	*In.*
Westfield	Hampden	Rev. E. Davis	10	72	14, 25	27	45.8	4.51
Williams College	Berkshire	Prof. A. Hopkins	7	70	24	25	44.0	5.27
RHODE ISLAND.								
Newport	Newport	Wm. H. Crandall	10	76	26	30	51.7	4.64
CONNECTICUT.								
Pomfret	Windham	Rev. D. Hunt	10	72	24, 25, 30	30	49.9	4.47
Columbia	Tolland	Wm. H. Yeomans	1	82	24	30	52.0	.....
Middletown	Middlesex	Prof. John Johnston	10	82	26	27	50.3	3.21
Colebrook	Litchfield	Charlotte Rockwell	10	74	30	25	43.6	.....
NEW YORK.								
Moriches	Suffolk	Miss N. Smith	10	85	14	33	55.9	4.06
South Hartford	Washington	G. M. Ingalsbe	1	72	24, 25, 27	25	46.4	2.27
Albany	Albany	H. M. Paine, M. D.	1	72	24, 27	35	50.9	4.59
Fishkill Landing	Dutchess	Wm. H. Denning	10	78	25	31	50.1	3.05
Garrison's	Putnam	Thomas B. Arden	10	79	14, 25	32	50.3	4.64
Throg's Neck	Westchester	Elizabeth Morris	8	74	25	33	50.4	.....
Deaf & Dumb Inst.	New York	Prof. O. W. Morris	10	83	25	39	54.0	4.94
Columbia College	....do	H. B. Cornwall	10	76	25	35	51.2	3.16
Flatbush	Kings	Eli T. Mack	10	80	25	34	51.3	5.75
Newburgh	Orange	James H. Gardiner	8	75	22	35	50.1	3.60
Gouverneur	St. Lawrence	C. H. Russell	10	61	25	20	42.4	3.32
South Trenton	Oneida	Storrs Barrows	11	70	24, 25	24	43.7	4.78
Theresa	Jefferson	S. O. Gregory	7	64	24, 25	20	41.5	4.36
Depauville	....do	Henry Haas	7	65	27	24	43.7	7.00
Oswego	Oswego	Wm. S. Malcolm	1	65	24, 25	30	47.2	6.32
Palermo	....do	E. B. Bartlett	1, 9	65	24, 25	20	42.8	5.60
Baldwinsville	Onondaga	John Bowman	10	65	25	27	43.7	.....
Skaneateles	....do	W. M. Beauchamp	10	68	25	26	44.6	.....
Auburn	Cayuga	John B. Dill	11	78	25	26	50.0	.....
Nichols	Tioga	Robert Howell	10	80	24	24	45.6	.....
Geneva	Ontario	Rev. Dr W. D. Wilson	10	71	24	29	47.0	3.43
Rochester	Monroe	M. M. Mathews, M. D.	10	69	21, 25	27	46.8	4.29
Do	....do	Prof. C. Dewey	7, 10	69	25, 29	28	46.8	4.29
Buffalo	Erie	William Ives	11	69	24	26	47.8	3.00
NEW JERSEY.								
Paterson	Passaic	William Brooks	10	81	25	32	51.8	5.04
Newark	Essex	Wm. A. Whitehead	10	80	26	33	52.2	4.69
Trenton	Mercer	E. R. Cook	10	83	25, 26, 30	40	59.4	7.97
Burlington	Burlington	John C. Deacon	10	80	14, 25, 26, 30	32	51.2	4.50
Moorestown	....do	Thomas J. Beans	2, 10	79	26, 30	34	51.8	4.23
Mount Holly	....do	M. J. Rhees, M. D	10	78	30	33	51.8	.....
Seaville	Cape May	Barker Cole	9, 10	76	17	32	49.3	5.00
Haddonfield	Camden	James S. Lippincott	10	78	30	32	51.4	3.25
Greenwich	Cumberland	R. C. Sheppard	10	78	30	35	52.9	2.52

Table showing the range of the thermometer, &c., for October—Continued.

Place.	County.	Observer's name.	Date.	Max.	Date.	Min.	Mean.	Rain.
PENNSYLVANIA.								
				°		°	°	*In.*
Nyces	Pike	John Grathwohl	10	78	24	24	46.4	3.45
Fallsington	Bucks	Ebenezer Hance	10	80	26	35	52.0	5.00
Philadelphia	Philadelphia	Pf. J. A. Kirkpatrick	10	78	25	38	55.9	3.36
Moorland	Montgomery	Anna Spencer	10	80	30	31	51.1	4.25
Dyberry	Wayne	Theodore Day	10	76	25	19	43.0	.....
Nazareth	Northampton	L. E. Ricksecker	10	80	29	34	50.4	.....
North Whitehall	Lehigh	Edward Kohler	10	78	30	25	49.7	.....
Harrisburg	Dauphin	John Heisely, M.D	10	77	26	38	54.2	3.09
Tioga	Tioga	E. T. Bentley	10	78	22	24	49.8	2.65
Pennsville	Clearfield	Elisha Fenton	10	75	22	26	46.5	3.12
Connellsville	Fayette	John Taylor	10	76	30	24	49.0	.....
Canonsburg	Washington	Rev. Wm. Smith, D.D	10	74	30	23	47.0	3.07
DELAWARE.								
Wilmington	New Castle	U. D. Hedges, M.D	10	80	30	34	51.3	4.00
MARYLAND.								
Woodlawn	Cecil	Jas. O. McCormick	10	83	30	34	53.3	4.01
Annapolis	Anne Arundel	Wm. R. Goodman	10	81	30	32	50.7	4.16
St. Inigoes	St. Mary's	Rev. J. Stephenson	10, 11	82	30	40	57.9	3.95
Sykesville	Carroll	Miss H. M. Baer	10	80	26, 30	31	51.6	3.00
MISSISSIPPI.								
Natchez	Adams	Robert McCary	26	82	19, 21, 29	40	63.6	1.77
TENNESSEE.								
Clarksville	Montgomery	Wm. M. Stewart	12	76	29	38	55.9	1.03
KENTUCKY.								
Louisville	Jefferson	Mrs. L. Young	9	79	29	36	55.6	1.84
Chilesburg	Fayette	S. D. Martin, M.D	8, 9, 10, 11	76	29	33	54.5	1.55
London	Laurel	W. S. Doak	13	78	20 30	36	56.5	.....
Danville	Boyle	O. Beatty	9, 10	78	29	35	55.8	1.25
OHIO.								
Saybrook	Ashtabula	James B. Fraser	9	73	24, 25	31	49.4	2.00
Austinburg	....do	E. D. Winchester	9	75	24	24	46.4	0.50
New Lisbon	Columbiana	J. F. Benner	9	76	30	26	49.6	1.15
Welshfield	Geauga	B. F. Abell, A. M	9	76	29	32	48.1	3.90
Milnersville	Guernsey	Rev. D. Thompson	10	76	30	25	.....	1.26
Wooster	Wayne	Martin Winger	9	78	30	28	49.8	.....
Gallipolis	Gallia	A. P. Rogers	10	76	30	29	52.0	1.71
Kelley's Island	Erie	Geo. C. Huntington	7, 9	74	28, 29	38	53.5	3.11
Norwalk	Huron	Rev. A. Newton	9	75	29, 30	30	48.6	2.03
Westerville	Franklin	Pf. H. A. Thompson	9	80	30	28	47.2	0.85
Kingston	Ross	Prof. Jno. Haywood	9	81	30	31	52.2	0.92
Toledo	Lucas	J. B. Trembly, M.D	9	79	30	32	50.2	2.25
Marion	Marion	H. A. True, M.D	9	72	29, 30	30	47.7	1.41
Urbana University	Champaign	Prof. M. G. Williams	9	76	29	29	50.0	1.22

Table showing the range of the thermometer, &c., for October—Continued.

Place.	County.	Observer's name.	Date.	Max.	Date.	Min.	Mean.	Rain.
OHIO—Cont'd.				°		°	°	*In.*
Hillsborough	Highland	J. McD. Mathews	9	73	29	32	51.3	0.87
Ripley	Brown	G. Bambach, M.D	9	81	30	31	55.4	0.88
Bethel	Clermont	Geo. W. Crane	12	78	29	31	53.4	0.75
Cincinnati	Hamilton	George W. Harper	10, 12	79	29	33	54.0	0.86
College Hill	do	John. W Hammitt	9	77	29	31	54.3	0.75
Do.	do	L. B. Tuckerman	2, 3	80	29, 30	32	53.0	0.80
MICHIGAN.								
Monroe	Monroe	H. & F. Whelpley	9, 10, 11	72	22	31	48.3	2.52
State Ag. College	Ingham	Prof. R. C. Kedzie	9	74	29, 30	29	46.5	2.79
Benzonia	Benzie	G. E. Steele	9	73	29	20	44.6	.....
INDIANA.								
Vevay	Switzerland	Chas. G. Boerner	10	96	27, 29	30	.....	.....
Richmond	Wayne	John Valentine	8, 9	73	29	29	49.1	1.11
Spiceland	Henry	Wm. Dawson	8	79	29	32	51.0	1.60
Columbia	Whitley	Dr. F. & Miss McCoy.	9	91	30	28	51.0	2.38
Indianapolis	Marion	W. W. Butterfield	8	79	29	31	51.9	.....
Farmers' Institute	Tippecanoe	Isaac E. Windle	11	73	28	30	55.2	1.75
New Harmony	Posey	Jno. Chappellsmith	11	77	29	37	56.3	1.38
ILLINOIS.								
Chicago	Cook	William Brookes	9	78	29	22	48.9	.....
Sandwich	DeKalb	N. E. Ballou, M.D	7, 9, 10	75	29	22	49.4	1.48
Ottawa	La Salle	Mrs. E. H. Merwin	7	81	28, 29	28	50.8	1.84
Winnebago	Winnebago	Jas. W. Tolman	7	78	29	17	48.2	3.53
Wyanet	Bureau	E. S. & Miss Phelps	9	82	29	25	52.6	2.90
Tiskilwa	do	Verry Aldrich	7, 8	78	29	26	51.4	.....
Elmira	Stark	O. A. Blanchard	9	76	29	22	52.0	2.25
Hennepin	Putnam	Smiley Sheppard	7, 9	76	29	26	52.0	.....
Peoria	Peoria	Frederick Brendel	7, 8	79	29	29	54.7	1.67
Pekin	Tazewell	J. H. Riblett	1	89	29	28	54.6	1.83
Springfield	Sangamon	G. M. Brinkerhoff	1	84	28	32	51.6	.....
Dubois	Washington	Wm. C. Spencer	23	82	29	30	53.8	3.45
Waverly	Morgan	Timothy Dudley	8	81	29	28	54.9	2.10
Murraysville	do	Dr. J. & Miss Grant	8	80	29	26	55.2	2.25
Galesburg	Knox	Pf. W. Livingston	8	79	29	29	52.2	4.39
Augusta	Hancock	S. B. Mead, M. D	8	79	29	24	53.7	3.35
WISCONSIN.								
Manitowoc	Manitowoc	Jacob Lüps	9	79	29	30	48.0	3.33
Milwaukee	Milwaukee	I. A. Lapham, LL.D	9	77	29	25	48.3	4.13
Do	do	Carl Winkler	9	79	29	28	49.8	5.23
Geneva	Walworth	Wm. H. Whiting	7	76	29	20	48.0	.....
Delavan	do	Leveus Eddy	9	75	29	17	46.5	2.52
Waupacca	Waupacca	H. C. Mead	9, 10, 11	80	30	25	46.4	.....
Weyauwega	do	J. C. Hicks	10	79	30	22	46.7	5.50
Rocky Run	Columbia	W. W. Curtis	10	78	29	17	47.3	4.06
Baraboo	Sauk	M. C. Waite	10	76	29	20	49.6	5.63
Plymouth	Sheboygan	G. Moeller	9, 10	80	29	23	46.3	3.70
Odanah	Ashland	Edwin Ellis	6, 9	76	30, 31	26	43.7	.....

Table showing the range of the thermometer, &c., for October—Continued.

Place.	County.	Observer's name.	Date.	Max.	Date.	Min.	Mean.	Rain.
MINNESOTA.				°		°	°	*In.*
Minneapolis	Hennepin	Wm. Cheney	6	86	30	19	47.6	2.65
Sibley	Sibley	C.W.&C.E.Woodbury	6	86	29	18	49.4	4.52
New Ulm	Brown	Charles Roos	6	87	29	22	51.5	3.11
IOWA.								
Clinton	Clinton	J.P.Farnsworth,M.D	6	78	29	22	51.7	4.00
Davenport	Scott	George B. Pratt	7	75	29	25	49.3	2.67
Dubuque	Dubuque	Asa Horr, M. D	9	77	29	21	50.6	3.77
Muscatine	Muscatine	I. P. Walton	8	77	29	22	50.4	3.63
Fort Madison	Lee	Daniel McCready	7	84	29	23	54.1	2.73
Guttenberg	Clayton	Philip Dorweiler	9	78	29	16	47.6	.....
Ceres	....do	John M. Hagensick	6	74	29	14	48.7	5.72
Manchester	Delaware	Allen Mead	6	78	29	18	48.1	.....
Mount Vernon	Linn	Prof. A. Collins	6,8	78	29	24	50.5	.....
Iowa City	Johnson	Prof. T. S. Parvin	8,10	82	29	25	53.9	6.35
Independence	Buchanan	A. C. Wheaton	6	86	27	10	46.7	10.20
Do	....do	D. S. Deering	6	76	29	20	49.5	.....
Waterloo	Black Hawk	T. Steed	6	80	29	16	51.0	.....
Iowa Falls	Hardin	N. Townsend	5,7	78	29	22	47.2	6.31
Des Moines	Polk	Rev. J. A. Nash	6,8	81	29	23	47.9	7.50
MISSOURI.								
St. Louis University	St. Louis	Rev.F.H.Stuntebeck	8	80	29	34	58.8	3.11
Athens	Clark	J. T. Caldwell	7	72	17	37	54.5	3.94
Canton	Lewis	George P. Ray	7	87	29	21	55.8	3.96
Harrisonville	Cass	John Christian	5,6,7,8	80	29	26	56.6	0.72
Easton	Buchanan	P. B. Sibley	7	83	29	25	56.7	2.81
KANSAS.								
Atchison	Atchison	Dr.H.B. & Miss Horn	5	86	29	20	55.5	.....
NEBRASKA TER.								
Elkhorn	Washington	John S. Bowen	5	85	29	16	54.0	.....
Bellevue	Sarpy	Rev. Wm. Hamilton.	6	80	28	20	55.7	3.32

Table showing the average temperature and fall of rain (in inches and tenths) for the month of October, in each year named, and for the five years first named, collectively, with the average number of places in each State in which the observations were made.

States and Territories.	Av. number of places.	Averages, 1855.		Averages, 1856.		Averages, 1857.		Averages, 1858.		Averages, 1859.		Av. for five years.		Averages, 1863.		Averages, 1864.		Averages, 1865.	
		Mean temp.	Mean rain.	Mean temp.	Mean rain.	Mean temp.	Mean rain.	Mean temp.	Mean rain.	Mean temp.	Mean rain.	Mean temp.	Mean rain.	Mean temp.	Mean rain.	Mean temp.	Mean rain.	Mean temp.	Mean rain.
		Deg.	*In.*	*Deg.*	*In.*	*Deg.*	*In.*	*Deg.*	*In.*	*Deg.*	*In.*	*Deg.*	*In.*	*Deg.*	*In.*	*Deg.*	*In.*	*Deg.*	*In.*
Maine	6	48.4	7.0	48.0	4.9	47.0	6.8	47.0	4.7	42.4	1.9	46.6	5.1	48.2	4.74	42.6	3.58	43.8	4.32
New Hampshire	3	50.2	9.2	47.4	2.8	47.1	6.6	45.3	6.3	41.0	1.9	46.2	5.3	46.2	3.74	45.5	4.50	42.9	4.39
Vermont	4	46.7	6.0	46.0	2.1	45.6	5.2	47.6	4.1	41.2	1.7	45.4	3.8	49.5	3.86	44.6	4.79	40.8	3.19
Massachusetts	12	47.4	9.3	50.6	2.4	49.6	4.1	52.2	3.1	46.4	2.2	49.2	4.2	52.3	3.13	49.2	3.09	47.1	5.17
Rhode Island	1	.....	.....	.....	.....	50.5	2.9	54.2	2.8	48.0	2.6	50.9	2.8	51.4	2.97	.....	.....	51.7	4.64
Connecticut	4	52.3	10.0	50.9	1.8	51.3	5.0	53.3	3.0	46.8	1.4	50.9	4.1	50.7	4.25	45.9	3.80	49.0	3.84
New York	17	49.2	5.0	49.1	1.8	48.4	4.9	52.8	3.1	46.1	1.6	49.1	3.3	49.0	3.42	48.0	4.47	47.7	4.50
New Jersey	4	51.8	4.6	52.8	1.4	55.2	3.5	55.2	1.6	47.5	2.7	52.5	2.8	54.1	4.52	51.1	1.98	52.4	4.65
Pennsylvania	19	50.6	3.6	51.3	1.7	52.1	3.0	55.9	2.3	48.7	1.8	51.7	2.5	50.7	4.96	50.3	2.63	49.6	3.50
Delaware	1	51.7	.....	.....	.....	56.3	3.8	62.2	2.6	.....	3.3	56.7	3.2	.....	.....	52.3	1.80	51.3	4.00
Maryland	4	52.0	3.8	53.8	3.1	54.2	2.4	56.8	3.0	50.4	2.4	53.4	2.9	55.6	3.21	52.2	2.35	53.4	3.78
District of Columbia	1	53.9	3.5	54.8	1.8	54.6	1.9	58.4	2.5	51.7	2.5	54.7	2.5	54.1	5.02	.....	.....	.....	.....
South Carolina	5	62.6	0.8	62.1	2.3	61.9	1.5	68.0	1.6	66.9	0.6	64.3	1.4	.....	.....	64.2	2.70	.....	.....
Tennessee	2	54.7	1.2	58.5	2.5	56.9	2.2	62.2	2.3	55.7	1.3	57.6	1.9	.....	.....	.....	.....	55.9	1.03
Kentucky	4	53.2	1.2	56.6	1.8	53.5	3.0	59.0	3.5	52.9	1.6	55.1	2.2	51.0	5.89	51.3	3.52	55.6	1.55
Ohio	20	50.4	2.8	53.1	1.7	49.7	4.5	55.5	3.5	46.3	2.2	51.0	2.9	48.0	3.18	49.4	2.66	50.8	1.43
Michigan	7	46.4	3.5	48.5	2.6	46.2	2.1	51.1	3.1	45.5	2.8	47.5	2.8	45.6	2.34	45.0	1.62	46.5	2.66
Indiana	5	50.9	1.3	55.4	1.5	51.4	2.6	55.9	3.6	51.3	2.6	53.0	2.3	46.9	3.70	47.9	1.73	52.4	1.64
Illinois	14	51.2	2.8	55.7	3.0	50.5	2.2	53.4	3.6	48.9	1.7	51.9	1.6	44.6	3.79	48.5	2.13	52.3	2.59
Wisconsin	6	45.9	2.4	49.3	2.6	46.7	3.1	48.9	3.2	44.7	2.0	47.1	2.6	43.0	2.75	45.1	1.67	47.2	4.15
Minnesota	3	.....	.....	49.6	2.7	46.9	0.8	44.1	1.6	41.7	1.3	45.6	1.6	39.2	1.37	45.0	2.02	49.5	3.43
Iowa	9	47.7	3.1	53.2	6.6	49.2	2.2	51.2	4.6	48.4	0.8	50.0	3.4	42.7	3.66	46.5	3.13	49.8	5.29
Missouri	2	53.9	3.9	60.0	2.2	71.1	1.9	58.6	7.7	54.5	1.8	59.6	3.5	47.6	3.87	49.7	3.27	56.5	2.91
Nebraska Territory	3	.....	.....	.....	.....	48.9	3.9	51.9	6.0	51.6	1.3	54.1	3.7	39.6	0.75	45.7	4.23	54.9	3.32
Kansas	3	.....	.....	.....	.....	54.3	.....	56.9	6.6	54.3	0.5	55.2	3.6	49 1	1.39	50.5	0.68	55.5	.....
California	2	.....	.....	58.2	0.2	61.5	0.4	50.5	2.6	65.4	0.2	61.4	0.9	.....	.....	.....	.....	.....	.....

NOTES OF THE WEATHER, OCTOBER, 1865.

FROM THE SMITHSONIAN INSTITUTION.

Wolfville, Nova Scotia.—October 23.—First snow, very little.

Gardiner, Maine.—The variation of the barometer has been very great, the range being 1.632°, probably greater than in any month recorded here for twenty-eight years. The mean heat of the month for twenty-nine years is 47.135°; the heat, therefore, this year is 3.040° less than the average; there have been but five Octobers as cold. The average amount of rain and melted snow during the twenty-seven years is 4.608 inches; this year it exceeds the average a little more than a tenth. A most unusual circumstance is the fact that there was sleighing for a few hours, four inches of snow having fallen during the afternoon and night of the 27th.

Cornish, Maine.—October 16.—All the mountains in the west and northwest covered with snow this morning. 22d. ploughed ground frozen nearly an inch. 28th, four and three-quarters inches of snow fell yesterday and to-day.

Steuben, Maine.—October 4.—The drought still continues distressingly; wells, brooks, &c., failing. 12th, nearly an inch of rain fell to-day. 14th, it froze last night, killing dahlias, &c., in full bloom. 18th, ground frozen this morning. 28th, a little snow fell from 5½ to 6 a. m.

West Waterville, Maine.—October 15, 16.—Rain-storm, severest of the last three months. 22d, ground frozen the first time this fall. 25th, ice half an inch thick formed last night and the night before; the first observed here. 28th, four inches of snow fell yesterday and to-day.

Lisbon, Maine.—October 5.—The Androscoggin river is said to be at this time two feet lower than at any time previous for forty years. 27th, snow fell to the depth of three inches, changing to rain next morning, which carried it all off again.

Standish, Maine.—October 9.—Wild geese flying south this morning. 14th, first killing frost on high ground; ice formed on still water half an inch thick. 24th, ground froze quite hard; ice formed on still water an inch thick. 27th, commenced to snow at 11.15 a. m., and changed to rain in the night; depth of snow two inches and six-tenths. 28th, snow all gone in the road.

Lee, Maine.—October 23.—An inch of snow fell to-day, the first this season. Four inches also fell on the 27th and 28th.

Claremont, N. H.—October 7.—Thermometer at 5.30 a. m. 24°; a heavy frost that destroyed all growing vegetation. 16th, snow seen on Mount Ascutney, in Vermont. 27th, ground white with snow, but when the sun came out it all disappeared.

Stratford, N. H.—October 4.—Snow this morning. 16th, rain-storm, changed to snow. 21st, hills and mountains white with snow this morning. 31st, Connecticut river, and all the streams flowing into it, are very low for October.

North Barnstead, N. H.—Two inches of snow fell on the 27th, and night of the 28th.

Concord, N. H.—October 13 and 14.—Ice one-sixteenth of an inch thick. 27th, snowed an inch and a half. 24th and 25th, ice on both these mornings.

Shelburne, N. H.—October 14.—Ice half an inch thick; ground frozen quite hard. 16th, snow on the mountains. 19th, rain nearly all day, with lightning in the evening. 21st, several snow squalls; none to show on the ground. 23d, snow squalls. 25th, ice on pools strong enough to bear a man. 28th, snow of

yesterday and last night four inches deep at 7 a. m. this morning, and continued falling fast till 11 a m., then turned to rain.

Claremont, N. H.—October 10.—The hills appeared white with snow this morning. 20th, a severe hail shower from 2 to 2½ p. m. 28th, first snow-storm of the season, falling most of yesterday and to-day; depth of snow four inches; it turned to rain, and melted all away.

Lunenburg, Vermont.—The weather during October has been very mild for the season; rose-bushes have leaved out and blossomed in some instances the second time, and strawberries and raspberries have been found of the second crop. Three inches of snow fell on the 27th.

Middlebury, Vermont.—Two inches of snow fell from 8 p. m. of the 26th to 9 p. m. of the 27th.

Brandon, Vermont.—October 14.—Heavy frost; water froze an eighth of an nch thick. 16th, snow seen on the Green mountains for the first time this season. 19th, diffuse lightning at 7 p. m. in the southeast. 24th, thermometer at 5 a. m. 19°; water froze a quarter of an inch thick. 26th, first snow-storm of the season; it began at 8.30 p. m. to-day, continued all the 27th, and turned to rain before day on the 28th, melting the snow before sunrise. Depth of snow four inches.

Craftsbury, Vermont.—October 13.—Thin ice observed on vessels of water this morning, and hills white with snow. 19th, a thunder-shower occurred at 5 p. m. from the southwest; very little thunder this season. 20th, flurries of snow to-day, which melted as it fell. 21st, the ground this morning was white with snow for the first time this season; it nearly disappeared before night. Two inches of snow fell from the 26th to the 28th. The temperature of this month was five and a half degrees lower than the mean of October for the last eleven years. The mean of last month was three and seven-eighths degrees higher than the mean of September for the same period.

Georgetown, Massachusetts.—October 12.—Thunder-storm from 2 to 3 a. m.; thunder heavy, and lightning very vivid and almost incessant. A tree was struck in a garden a mile distant, and a barn was struck and consumed in Rockport, at Cape Ann. 13th, lightning flashes this evening low in the northwest. No frost to injure tomato or squash vines until to-day, and then only slightly. 24th, ice a quarter of an inch thick this morning. 27th, first snow of the season, melting in the morning upon reaching the ground. In the afternoon the temperature was lower and the snow gathered in a few places. The flakes were generally small and quite moist. At Haverhill, six miles, and at Lawrence, eight miles distant, four inches were measured. 30th, earth frozen two inches. 31st, wild geese flying south.

Newbury, Massachusetts.—October 12.—Some lightning at the commencement of the storm this morning about 2.30. 14th, heavy white frost; some ice formed. 19th, lightning at N.NW. in the evening. 27th, the storm to-day commenced with snow, but it did not accumulate at all.

Baldwinsville, Massachusetts.—October 10.—A heavy shower about 3 o'clock this morning, with very sharp lightning and heavy thunder. 27th, began to snow this morning, and continued all day; about an inch and a half fell; it turned to rain in the evening.

Williamstown, Massachusetts.—October 14.—First heavy frost last night. 27th, a snow-storm nearly all day.

Mendon, Massachusetts.—October 10.—A thunder shower at 4 a. m. 28th, ground frozen for the first time. 31st, deep wells have not risen.

New Bedford, Massachusetts.—October 31.—The frost in this locality kept off unusually late, but the severe drought of last month and August dried up the grass and caused flowers to wither and the leaves of many trees to fall prematurely, many species having been chiefly stripped for weeks.

Worcester, Massachusetts.—October 3.—Slight frost in low lands. 22d, water froze the eighth of an inch. 26th, one flock of geese migrated.

Newport, Rhode Island.—October 26.—This morning there was a heavy white frost, the first of the season.

Colebrook, Connecticut.—October 3.—Heavy frost. 20th, hail-storm, commencing about 11 a. m., lasting only a short time.

Columbia, Connecticut.—October 9.—Lightning at the north, but no cloud visible, (time not mentioned.)

Pomfret, Connecticut.—October 31.—Very dry the first part of the month; wells low; rains make no increase of water in wells as yet.

Palermo, New York.—October 1.—Showery; distant thunder in the west at 3.15 p. m. 5th, wild geese passing southward. 7th, frost; thunder-storm at 2 p. m.; distant thunder between noon and 2 p. m., with almost one continual roar. 9th, thunder in the NW. and diffused lightning in the north this evening. 11th, thunder-shower in the night. 14th, first black frost. 27th, first snow of the season; snow fell one inch in depth; snow and rain all day. 30th, the forests have nearly shed their leaves. 31st, this has been the coldest October in the last twelve years.

Theresa, New York.—October 1.—Thunder from the west, twenty peals; chain lightning. 9th, thunder from 3 to 6 p. m. from the west; forty-three peals. 14th, ground frozen. 26th, first snow; depth two inches.

Garrison's, New York.—The first frost occurred on the 2d of October, and ice made on the 15th. The month was very favorable for all fall agricultural operations.

South Trenton, New York.—October 9.—Thunder. 10th, thunder; the twenty-fourth day on which it has occurred this year. 21st and 22d, the ground frozen; ice three-eighths of an inch thick. 27th, snow covered the ground; first snow this fall.

Fort Ann, New York.—October 27.—Snow from 6 a. m. to 10 p. m.—two and a half inches.

Depauville, New York.—October 1.—Thunder-storm from the west at 10 a. m. 4th, first flock of wild geese. 13th, ice a tenth of an inch thick. 26th and 27th, three inches of snow. 31st, the 6.7 inches of rain and melted snow in October were hardly sufficient to start the streams or to moisten the ground deep enough for ploughing, and in consequence very little fall ploughing has been done yet. Meadows and pastures look green again, but grass is short.

Moriches, New York.—October 7.—The first frost noticed this morning; slight. There were reports of slight frost in other neighboring places, on one or two previous mornings, but saw none here.

Skaneateles, New York.—October 7.—Thunder-storm from 2½ p. m. to 3 p. m., west to north, thence east to northeast, from one to two miles distant. The lightning diffuse and sharp; the thunder resembled platoon rifle firing, sharp and short. 21st, snow one inch deep and very compact. 29th, snow early in the morning; thin ice.

South Hartford, New York.—The drought continued till the middle of October. Until that time the springs and streams of the vicinity were lower than ever known before at this season of the year. The September rains did not raise the brooks. The fall of rain on the 15th of October was sufficient to start the water in stream beds where none had run since the 13th of August. Five inches of snow fell from 3 a. m. to 11 p. m. of the 27th.

Gouverneur, New York.—October 9.—A severe thunder-storm from the south from 6 to 7½ p. m. 21st, a few flakes of snow fell this afternoon. 26th, a snow-storm commenced this afternoon and continued most of the time during the 27th; two and a half inches deep in all.

Rochester, New York.—October 14.—White frost this morning. 17th, hard frost, but not sufficient to kill tender vegetation. 24th, very hard frost, killing

all tender vegetables. 25th, ground frozen for the first time; ice an eighth of an inch thick. 29th and 30th, some snow early on both these mornings.

Newark, New Jersey.—The mean temperature of the month was about one degree below the average for the last twenty-two years, but its maximum exceeded all but five of the preceding twenty-two Octobers. With the exception of slight showers on the 4th and 10th the drought, which had prevailed during the most of September, was not broken until the evening and night of the 14th, when about nine-tenths of an inch of rain fell. This was followed by several copious rains later in the month, making the total fall more than an inch and a tenth above the average for October. The mercury did not fall below the freezing point at any time during the month, and there were only two or three mornings when there were any indications of frost, and then but slight.

Haddonfield, N. J.—The month of October was very dry until the 15th, after which several seasonable rains fell to the depth of three and a quarter inches, proving favorable to the growth of the young wheat, much of which was not sown until the last week.

Moorestown, N. J.—October 7.—First white frost, light. 14th, very heavy frost, closing the season for the growing of tender vegetation; previous frosts had done but little harm.

Seaville N. J.—October 7.—The first white frost observed this fall, back from the sea-cost in low places and swamps; ice to be seen. 13th, white frost with a little ice seen in low places. 17th, ice in low places as thick as window glass.

Grampian Hills, Penn.—October 7.—First frost of the season to affect vines: mostly killed on low grounds; on high ground not yet injured. 17th, ice this morning. 23d, leaves falling fast; woods beginning to appear bare. 27th, sprinkle of snow at night.

Philadelphia, Penn.—October 7.—First hoar frost. 25th, very heavy hoar frost, killing some of the tender vegetables.

Horsham, Penn.—October 13.—Heavy white frost, the first to injure vegetation, though there has been some in low places before. 30th, ice as thick as a window pane.

Canonsburg, Penn.—October 6.—Leaves of sugar maple beginning to change color. Plum and apple trees in blossom. 8th, thunder and lightning in the west at 6 a. m. 16th, hickory and oak leaves beginning to fall.

Nazareth, Penn.—October 13.—First frost, tomato vines, beans, &c., killed. 25th, ice a tenth of an inch thick on tubs of water in the open air.

Tioga, Penn.—October 3.—A light frost this morning, the first of the season. Wild geese flying south to-night. 14th, hard frost this morning; ice formed on a pail of water. 18th, wild geese flying south.

Sykesville, Maryland.—October 3.—Frost in the valley. 6th, frost; tender vines killed in the valley. 30th, ice a quarter of an inch thick.

Woodlawn, Maryland.—October 3.—A partial hoar frost. 7th, hoar frost and a little ice. 22d, frost and ice. 25th and 30th, ground frozen; puddles frozen over.

Natchez, Mississippi.—October 13.—Morning rainy, distant thunder in the southwest. 19th, a light frost this morning, the first this season. 29th, light frost this morning.

Clarkesville, Tennessee.—October 5.—The first frosts, very light; since the commencement of the month there have been more or less fogs prevailing in the early morning; they have generally disappeared before 8 o'clock a. m., the sky generally cloudless. There is a great deal of sickness existing throughout the country, scarcely a house in which there are not one or more cases of intermittent or remittent fever; since 1847 there has not been so sickly a season. 31st, the white frosts during the month have been very light, and although the forest trees show its effects in their varied colors, yet the tender vines, as beans, tomatoes, red pepper, &c., do not appear to have been touched.

Chilesburg, Ky.—October 4.—There was frost this morning, the first this autumn, mostly in low situations. 5th, general white frost this morning, killing tender vegetation. 12th, heavy fogs for several mornings; more than usual this month. 27th, a thunder-storm between 5 and 6 p. m.

London, Kentucky.—October 4.—Light frost, doing but little injury, 5th, heavy frost.

New Lisbon, Ohio.—October 5.—Spits of snow to-day. 17th, hard frost. 30th, ground frozen. The leaves of the forest have changed color, but have not yet all fallen.

Hillsboro', Ohio.—October 3.—A slight frost.

Urbana, Ohio.—October 1.—Forest trees first showing a change in the color of the foliage. 3d, white frost, first of the season; but no injury to the most tender plants, beans, cotton, &c. 6th, heavy white frost. 13th, apples, cherries, currants, annual roses, snowballs, &c., in full bloom. 16th, heavy white frost, ice. 28th, light dash of snow occasionally, late in the afternoon, the first of the season.

Westerville, Ohio.—October 17.—Ice this morning, the first this autumn; heavy frost last night.

Kingston, Ohio.—October 3.—Quite a sharp frost this morning.

Toledo, Ohio.—Frost on the mornings of the 2d, 3d, 4th, and 5th. 28th, snow squall in the afternoon, the first of the season. 29th, froze quite hard in the morning; ice formed in pools of water.

Austinburg, Ohio.—October 13.—Ice this morning. 18th, a flurry of snow in the afternoon and evening of the 18th, after a rain-storm.

Ke'ley's Island, Ohio.—October 17.—Frost reported in the interior of the island, but find no trace of it near the lake shore. 28th, nearly three inches of rain fell during the storm of the 26th to the 28th. 29th, slight traces of hoar frost in some localities; vegetation not injured near the lake. 31st, temperature of the lake 50°; it has fallen nineteen degrees during the month.

College Hill, Ohio.—October 3.—First frost noticed this season.

Gallipolis, Ohio.—October 30.—The first frost to kill vegetation occurred this morning.

Norwalk, Ohio.—October 6.—The first frost of the season.

Welshfield, Ohio.—October 1.—Thunder and lightning in the northeast from 7 to 10 p. m. 7th, very heavy thunder-storm, mostly north, from 4 to 8 a. m., also another at the north from 6 to 8 p. m. 13th, the first frost of the season; it did no damage. Dahlias continued in full bloom till the 22d, when the first severe frost occurred; water froze a quarter of an inch thick. The average yearly period without frost in this section is about four months and two-thirds. 28th, the first snow of the season fell to-day after a rain of two days and nights; depth of snow, an inch and a half.

Saybrook, Ohio.—October 13.—Slight frost on low grounds this morning; the first of the season; it had no effect on vegetation. 14th, considerable frost this morning; ice formed a twentieth of an inch in thickness on a pail of water in the open air. 31st, leaves have fallen considerably at this date; there was no snow during the month.

Wooster, Ohio.—October 17.—The first frost occurred this morning.

Marion, Ohio.—October 2, 3, 4.—Slight frosts, but doing no injury. 16th, 17th, sharp frosts, affecting garden vegetables. 27th, leaves begin to fall plentifully.

Bethel, Ohio.—October 3.—First frost; a little on boards, fences, &c., only. 16th, grass slightly bitten by the frost. 27th, lightning in the northwest at 6 p. m. 30th, a little ice, very thin.

Milnersville, Ohio.—October 3.—White frost this morning, a little ice on the 21st, 23d, and 30th.

Homestead, Michigan.—October 4.—Frost last night, killing vines, &c.;

first this fall to do damage. 5th, it froze hard last night. 7th, rain from the southwest, with thunder and lightning. 26th, about one inch of snow this morning, but it was soon melted by the rain to-day from the east. 31st, it snowed a little last night.

Oshtema, Michigan.—October 2.—Light frost this morning. 4th, frost this morning; killed vines. 7th, lightning in the southwest at night with thunder. 30th, ground frozen some this morning. 31st, the leaves on some of the oaks are quite green yet; the robin, bluebird, and American goldfinch are still here; wild geese are passing over every few days.

Kalamazoo, Michigan.—October 2.—There was a hard frost this morning; it killed corn, cane, vines, &c., effectually, and nearly froze over the top of water standing in barrels in the open air. Frost on the nights of the 3d and 4th of about the same intensity. 28th, snow fell to the depth of three-quarters of an inch last night, and it continued to fall during the most of this forenoon, and occasionally in the afternoon.

Richmond, Indiana.—October 3 to 6.—A light frost on each of these mornings. 16th, the first general killing frost. 28th, spitting snow in the morning; some very fine snow in the afternoon.

Spiceland, Indiana.—Slight frosts on the mornings of the 3d, 4th, 5th, and 6th. Heavy biting frost on the 16th; first to injure anything this fall. A few fine snow-flakes at times from 8 a. m. to 4 p. m. of the 28th.

Columbia City, Indiana.—October 7.—Lightning in the north. 28th, a very little snow, the first of the season.

Indianapolis, Indiana.—October 3.—Slight frost this morning, the first observed. 16th, very heavy frost this morning. 28th, small and scattering snow-flakes fell at intervals during the day.

Vevay, Indiana.—There were heavy fogs on the mornings from the 1st to the 10th, commencing soon after midnight and disappearing between 7 and 8 a. m. The first heavy frost occurred on the night of the 16th.

Waverly, Illinois.—October 16.—First light frost of the season. 27th, heavy thunder in the southwest this morning. 29th, first frost of the season as severe as the frost of August 30, 1863. The weather for September and October has been remarkably mild and pleasant, free from storms, heavy winds, and frost.

Dubois, Illinois.—October 16.—First frost. 29th, first killing frost.

Springfield, Illinois.—October 28.—First snow this morning.

Elmore, Illinois.—October 3.—Light frost this morning. 5th, distant thunder in the northwest at 8 p. m. 6th, thunder in the northeast at 7 p. m. 28th, snow this morning half an inch deep.

Sandwich, Illinois.—October 27.—An inch and a half of snow fell to-day.

Tiskilwa, Illinois.—October 3.—A little white frost this morning, the first seen this fall. 4th, more frost than yesterday, but not enough to kill anything on high ground; quite hard in river bottom. 6th, distant thunder at the west from about 3 a. m. to 7 or 8 a. m., and then at the north for about two hours later. 28th, two inches of snow this morning.

Wyanet, Illinois.—Light frost on the 3d, 4th, and 5th; heavy on the 16th. Three and a half inches of snow 10 a. m. of the 27th to 8½ a. m. of the 28th. Very heavy frost on the 29th, and the ground froze some. On the 30th snow fell all the afternoon, but melted as it fell.

Elmira, Illinois.—Light frost on the 3d, 4th, and 5th. On the 16th heavy frost and thin ice. 27th, first snow, about half an inch deep.

Murrayville, Illinois.—October 27.—Distant thunder in the morning and forenoon. 29th, wild geese flying southeast.

Pekin, Illinois.—The first frost was on the morning of October 29; the last in the spring was on the 22d of April; making one hundred and eighty-nine days without frost.

Augusta, Illinois.—October 7.—Wild geese flying south. 16th, first frost. 28th, ground begins to freeze.

Peoria, Illinois.—October 6.—Lightning at 5 a. m. in the northwest, thunder heard once. 25th, wild geese flying southward. General color of the woods green to October 20; general fall of leaf begins October 25. Ripe strawberries and raspberries; snowballs and cherries in blossom.

Winnebago, Illinois.—Frost on the 2d, 3d, 4th, and 5th. On the 27th the rain changed to snow between 6 and 7 p. m.; it fell moderately through the evening and heavier after midnight, and until 9 a. m. of the 28th; amount in all, six inches.

Galesburg, Illinois.—October 16.—First frost of the season.

Ottawa, Illinois.—October 2.—Frost. 6th, distant thunder at 7.30 a. m. 16th, hard frost, succeeded by a dense fog; the first ice formed this morning. 20th, 22d, 28th, wild geese flying east. 28th, an inch of snow. 29th, ice five-eighths of an inch thick. 30th, mist and flurries of snow.

Athens, Missouri.—October 16.—First frost. 24th, first snow, one-sixteenth of an inch.

Harrisonville, Missouri.—October 12.—Distant diffuse lightning southeast about 6½ p. m. 16th, a heavy frost in low locations, and the first noticed this season. 28th, thin ice on still water; nearly all tender vines killed.

Easton, Missouri.—October 30.—An inch of snow fell to-day.

Delavan, Wisconsin.—October 2.—First frost on the premises; hard frost on the three following mornings. 7th, faint lightning in the east this evening. 27th, rain changed to snow at 6 p. m., first snow; continued till 8.30 next morning. It measured about three inches deep, but it drifted so as to be uncertain, and the first half melted or it would probably have been six inches. 29th, thermometer at 6 a. m. 16½°; ice formed on the edges of a pond more than a quarter of an inch thick.

Plymouth, Wisconsin.—October 2.—First slight frost this morning. 7th, distant thunder from 5 to 6.15 a. m., northwest to northeast. 16th, first severe frost this morning. 28th, three inches of snow yesterday and this morning.

Milwaukee, Wisconsin.—October 3, 4, 5, frosty morning. 28th, first snow, following a protracted storm; depth of snow two inches.

Manitowoc, Wisconsin.—October 3, 4, 5, hoar frost. 7th, thunder-storm in the west from 5.30 to 6 a. m. 16th, ice; dahlias, leaves of cucumbers, grape vines, &c., frozen. 21st, ice this morning.

Odanah, Wisconsin.—October 3.—First frost to kill vines.

Rocky Run, Wisconsin.—October 2.—White frost, ice an eighth of an inch thick. 3d, 4th, 5th, frost and ice. 28th, eight inches of snow fell yesterday and to-day, also a sixteenth of an inch on the 30th.

Geneva, Wisconsin.—October 2.—First frost, very slight. 3d, frost killed vines of melons and pumpkins. 4th, first ice formed, thick as an ordinary pane of glass.

Weyauwega, Wisconsin.—October 3.—Previous to the 2d there had been no frost sufficient to cut vegetation or change color of leaves; but during the last four nights the frost has put an end to the growth of vegetation for the year. 16th, ground frozen slightly. 27th, snow fell during yesterday and to-day, with intervals, and stopping late this night, amounting in all to seven inches and five-hundredths. 30th, the ground is still covered with snow to the depth of two inches. 31st, a slight flurry of snow last night.

Baraboo, Wisconsin.—October 2.—First frost of the season, destroyed dahlias, tomatoes, beans, squashes, and other tender vegetation. 27th, first snow-storm; it was of twenty-three hours duration, and the snow fell to the depth of eight inches, after allowing for what melted from the warmth of the soil.

Waupaca, Wisconsin.—October 25.—First snow-flakes seen. 27th, four inches of snow. 31st, flurries of snow.

Sibley, Minnesota.—October 2.—Slight frost, no damage in this vicinity. 27th, first killing frost; an eighth of an inch of snow to-day.

New Ulm, Minnesota.—October 2.—A very slight frost but no damage; no white appearance, it only blackened leaves on cucumbers, &c. Some ice reported on a very high point five miles out toward the southwest. 27th, first ice seen; it was an eighth of an inch thick on water barrels. Snow on the 25th, 26th, and 27th. The snow disappeared on the 31st.

Minneapolis, Minnesota.—October 2.—First frost. 25th, first snow. 27th, first ice.

Davenport, Iowa.—October 2.—First white frost, very light, seen in the country, but not any in town. 27th, three inches of snow fell to-day.

Muscatine, Iowa.—October 3.—First frost seen this morning, not enough to hurt vegetation. 28th, two inches of snow this morning; vegetation is still green. 29th, white frost. 30th, snowed from 10 a. m. to 7 p. m. and melted as fast as it fell.

Iowa City, Iowa.—October 2.—Frost this morning. 16th, ice to-day. 28th, two inches of snow. 30th, one inch of snow.

Dubuque, Iowa.—October 1 and 2.—Light white frost on both these mornings. 3d, sharp white frost. 5th, thunder-shower from northwest from noon to near 3 p. m.; sharp vivid lightning. Four inches of snow on the 27th and half an inch on the 30th.

Independence, Iowa.—October 5.—Zigzag lightning in the northwest at 9 a. m.; diffuse lightning in the southwest at 7 p. m. 15th, frost. 16th, heavy white frost. 22d, heavy thunder-storm came up in the north at 12 p. m., passing over to the south. 27th, after a rain-storm which lasted four and a half days, it commenced hailing at 10.30 this morning and continued to hail about thirty minutes, when it changed to snow, continuing till 1 a. m. of the 28th; seven inches of snow fell. 28th, standing water just skimmed over with ice last night. 29th, ice formed last night half an inch in thickness and the surface of the ground where not covered by snow was slightly frozen. 30th, snow squall from 2 till 4 p m.

Manchester, Iowa.—October 5.—Distant thunder at the west and northwest early in the morning, also at night. 19th, frost. 28th, seven inches of snow fell after several days rain, the first snow this season. 29th, hard frost. 30th, half an inch of snow.

Independence, Iowa.—October 16.—Frost. 27th, seven inches of snow.

Clinton, Iowa.—October 14 and 15.—First frosts, light. 23d to 28th, an almost continued storm, ending with a fall of four inches of snow. 28th and 29th, the first heavy frosts, that killed vegetation. Apples, pears, and strawberries have blossomed and showed quite large fruit; strawberries ripened; apples of the second crop were shown as large as walnuts.

Iowa Falls, Iowa.—October 6.—Brants have been going south in large flocks for several days. 13th, large flocks of geese, brants, and cranes, going south. 18th, large flocks of brants and geese going south in the morning and north in the afternoon. 19th and 20th, birds going south. 21st, birds going north. 27th, four inches and three-tenths of snow after several days' rain. 30th, nearly half an inch of snow.

Mount Vernon, Iowa.—October 27.—Two inches of snow fell to-day.

Guttenberg, Iowa.—October 2 and 3.—Heavy white frost on both these mornings. 14th, white frost; ice formed a quarter of an inch thick. 22d to 26th, rain showers every day, which changed to snow during the night of the 26th, and fell on the 27th about nine inches. 29th, hard frost this morning. 30th, half an inch of snow from 2 p. m. till in night. 31st, snow melting fast.

Ceres, Iowa.—October 16.—Frost this morning. 27th, first snow, eight inches deep.

Fort Madison, Iowa.—October 16.—Hard frost last night; the end of the growing season and the first frost this fall. 27th, half an inch of snow. 30th, snowed all day, melting as it fell.

Des Moines, Iowa.—October 16.—A very slight frost, just discernible on the fences, but not perceptible on the tenderest vines. 19th, quite a white frost this morning, yet scarcely leaving its mark on the tenderest vegetation. 27th, it commenced snowing this morning (after three days' rain) and snowed all day, mostly melting as it fell; on the morning of the 28th the ground was white with snow, which disappeared during the day. 28th, this morning was manifest the first severe freezing of the season, ice was formed nearly half an inch thick and vegetation, until then almost untouched, was killed. 29th, ice this morning in vessels was over an inch in thickness. 30th, it snowed nearly all day, melting as it fell.

Waterloo, Iowa.—October 16.—First frost, but so slight as not to kill the tomato vines. 22d, heavy thunder and vivid lightning northeast. 27th, began snowing at 9 a. m., snowed all day and all the night following. A foot and a half is supposed to have fallen, but much melted as it fell. 29th, last night it froze severely, hard enough to bear a horse.

Atchison, Kansas.—October 12.—Diffused lightning in the south during the evening; wild geese flying south. 16th, quite a heavy frost this morning. 23d, thunder and lightning in the east during the evening. 27th, drizzling rain and spitting snow at intervals all day, being the first snow of the season. 30th, an inch of snow fell to-day from 3 a. m. to 6 a. m,

Fort Riley, Kansas.—October 22.—Cranes flying in a westerly direction. 30th, light snow, not measurable, the only snow during the month.

Bellevue, Nebraska.—October has been remarkably warm and pleasant, no frost noticed till the 28th, when ice formed from a half to three-quarters of an inch in thickness, and as thick the following night. On the 27th there was a little snow but no freezing. Many of the trees were green, and tomato vines fresh and growing. Some trees were leafless and the prairie grass generally was dead at the top as if ripe, dying without frost.

Elkhorn City, Nebraska.—October 15.—Wild geese. 18th, no frost perceptible, but the cold wind has somewhat wilted garden vines and flowers. Flocks of blackbirds seen until to-day, inclusive. 22d, distant thunder and lightning to the northwest. 23d, thunder and lightning with rain at 1½ p. m. and after night. 27th, snowing from in the night till 4 p. m. to day, chiefly melted. 28th, ground frozen one inch, no white frost. 29th and 31st, heavy white frost. September and October have been warmer than in any former year since this record was commenced, (1858,) and have been wet. The frost has been of unprecedented lateness, and has not yet gone to any great depth.

[Mem.—The storm about the 27th was general throughout the country, either in the form of rain or snow. The above notes contain all the records which the registers give of it where it appeared as snow, or snow and rain together, but not all where it was in the form of rain only.]